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RETROSPECT

1851-1928

ABEL CHAPMAN'S WORKS

BIRD-LIFE OF THE BORDERS . . .	1886
Do. do. (RE-WRITTEN)	1907
ART OF WILDFOWLING . . .	1896
WILD NORWAY . . .	1897
WILD SPAIN * . . .	1893
UNEXPLORED SPAIN * . . .	1910
ON SAFARI (BRITISH EAST AFRICA)	1908
SAVAGE SUDAN . . .	1921
BORDERS AND BEYOND . . .	1924
RETROSPECT . . .	1928

* Comp jointly with Walter J. Buck, British Vice-Consul at Jerez

* * * * *

SEE APPRECIATIONS BY THEODORE ROOSEVELT
AND F. C. SELOUS

Also some selected Press Notices at end of volume

RETROSPECT

REMINISCENCES AND IMPRESSIONS
OF A HUNTER-NATURALIST
IN THREE CONTINENTS

1851-1928

By ABEL CHAPMAN

*ILLUSTRATIONS BY JOSEPH CRAWFALL, W. H. RIDDELL (20 IN COLOUR)
AND ROUGH SKETCHES BY THE AUTHOR*

"The greatest thing a human soul ever does in this world is to see something and to tell what it saw in a plain way. Hundreds of people can talk for one who can think: but thousands can think for one who can see. To see clearly is poetry, prophecy, and religion, all in one."—RUSKIN.

[The seeing eye reveals but does not invent.—A. C.]

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1928

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WITH DEEP HUMILITY AND GRATITUDE

TO THAT

DIVINE PROVIDENCE

WHICH HAS GRANTED, GUARDED, AND

HAPPILY GUIDED A LIFE BEYOND

THE ALLOTTED SPAN

[A long Retrospect—with its alternations of storm-cloud and sunshine ;
of failure and success , of pleasure and peril—ever reveals the trace of
consistent GUIDANCE towards a potential fulfilment.]

PREFACE

RETROSPECT forms the tenth work completed by the Author during a period of forty years—giving an average of four years' preparation to each. The respective periods of study have been, however, concurrent and cumulative throughout; that of the present volume synchronising with the full three-quarters of a century specified in the title, and including the experiences of some sixty overseas expeditions afar—"where'er the billows roll,

From the world's girdle to the frozen Pole."

Thus, while the supply of "raw material" has always been adequate, and the bricks have never lacked straw, the methods of manufacture—(to wit, my interpretations of Wild Nature)—stand for judgment both now and in the days to come.

There is always a risk of Reminiscences degenerating from their proper function—that of conserving garnered harvests—into merely senile garrulity:—

"To husband out Life's taper to the close,
And keep its flame from wasting by repose."—GOLDSMITH.

That danger has been foreseen and, I trust, avoided: since there are chapters in the present work—they shall not be specified—which justify the issue of the whole: while some of those in lighter vein at least record phases of thought and of activities which have completely passed away and are already, in great part, relegated to oblivion—"For each age is a dream that is dying, or one that is coming to birth."

Scarcely, nevertheless, will I claim for *Retrospect* equal standard, as regards personal field-exploration, with my two previous post-war works: though the animal-studies of my late cousin, Joseph Crawhall (some of whose drawings recently realised £1000, and far more, by auction in London), and Mr W. H. Riddell's series of coloured plates, will compensate for any deficiency

ABEL CHAPMAN.

HOUGHTON, WARK,
NORTHUMBERLAND, *April* 12, 1928.

“Who thinks a perfect piece to see,
Thinks what ne’er was, nor is, nor e’er shall be.
In every work regard the writer’s end,
Since none can compass more than they intend ;
And if the means be just, the conduct true,
Applause in spite of trivial faults is due.
As men of learning, sometimes men of wit,
T’avoid great errors, must the less commit.
A perfect judge will read each work of wit
In the same spirit that its author writ ;
Survey the whole, nor seek slight faults to find,
Where Nature rules and rapture warms the mind.”—POPE.

L'ENVOI

ONCE upon a time—'twas a glorious Spring morning in the long, long ago—the Author was a-fishing North Tyne. His companion was an old gamekeeper, Robert Ternent, who had served his father and himself during a period of forty years.¹ Now Ternent was a born enthusiast, one of these ebullient spirits whose exuberant optimism—call it not egotism—ever bubbled over to refresh a thirsty earth. The river that happy morning ran brimming over, foam-flecked and moss-brown from the moors—in short, in finest ply: also the wind blew soft and warm from the west. Possibly these favouring facts—conjointly with the Genius of the Glad Season—each added its quatum to the resilience aforesaid.

Though I had the advantage of the down-stream position yet my rearguard consistently scored more rapidly; and presently that exuberance burst all bounds. "Mr Abel," he exclaimed, "I think I'm the best fisher on North Tyne!" Agreed, *nemine contradicente*, and operations proceeded. Ten minutes later came a brace of beauties on one cast. Thereupon followed a second inebriate explosion of joy—"Mr Abel, I'm the best fisher *in the world!*" Again agreed, amidst cheers by all within earshot (which comprised a passing curlew).

Well! in somewhat analogous spirit—call it not egotism—the Author, in ecstatic day-dreams sometimes awakes to find himself hazily wondering whether books such as his are (*sui generis*) "the best in the world"? Whether they, too, are destined—like Ternent's ebullience—to refresh a thirsty world? *slightly* parched, in this area, by our dear old friends the Dry-as-Dusts and "dermatologists" who, 'tis said, love "to learn more and more about less and less."

¹ *Obit* at Houxty, 17th December 1906.

Is that equally agreed? I fear not—at least not unanimously; since sounds of insurgence reach me from the far left. “Of a class apart” is the sinister amendment. Well, perhaps that is a better definition—less aggressive, non-committal. Let it stand.

Writing in one’s seventy-seventh year, and with that long span mainly devoted to this following-up of the spoor of Wild Nature—the wildest for choice—having also in view the opportunities enjoyed for the pursuit of that study, not only at home, but in some of the most savage spots that still survive on earth—it is no very extravagant claim to indulge in a day-dream? For few men living, if any, can base constructive conclusions—be they right or wrong—upon a broader or more comprehensive experience. Truisms, it has cynically been said, are sometimes true: and an equal remark may perchance apply to day-dreams—the latter, moreover, inspire. Nor need I offer any apology should the day-dream reveal a secret confidence (and pride) in the sterling value of my life’s work—faults and failures innumerable, despite.

“ALL CLEAR AFT!”



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ERRATA

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- 31, foot—*for* “subnival” *read* “subniveal”
106, in title—*for* “cinereus” *read* “monachus”
119, ninth line—*for* “intelligensia” *read* “inteligensia”
143, foot—*for* “alfa-grass” *read* “halfa-grass”
311, mid—*for* “out-thurst” *read* “out-thrust”
-

Page 103—Mr H. F. Witherby suggests that the Pipits breeding on Grédos may have been either Tawny or Alpine Pipits.

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RETROSPECT

CHAPTER I

SIXTY YEARS ON THE BORDER MOORS

“Remembrance and reflection, how allied !
What thin partitions thought from sense divide.”—POPE.

A SURVEY of such a period as the last sixty years, even when limited to the narrower aspect of field-sports alone, involves reviewing a series of striking changes. Were the retrospect broadened in scope and extended to a centennial, those changes would expand to something resembling a revolution. Still, without harking so far back, there are those now living who have eye-witnessed cataclysms of change the like of which had never before, during 6000 years of recorded history, been compressed within less than one brief century.

Hardly a circumstance of everyday life but has undergone revolution—some have been revolutionised half a dozen times. So swiftly has one vital change pressed on the heels of another that no sooner has some time-honoured institution been superseded—oft, in its turn, to be displaced by a later innovation—than those venerable predecessors are almost as totally forgotten as though they had never existed. The stage-coach, the flint-and-steel, the “copper-cap” of Hawker (*obit* 1853), the Clyde-built clipper and a hundred other old friends have vanished as completely as the mastodon—not only superseded and “scrapped,” but blotted out of memory. And as with things, so with men. Memory almost ceases to function. The latest idea or device is taken seriously, as it were a matter of course—accepted, adopted, absorbed; sometimes without reflection, and as though it had been with us always. To-day we

have no longer a yesterday ; there is no time for such luxuries as retrospect or reflection. Possibly "'Tis folly to remember, 'twere wiser to forget." In an era of almost insensate haste and of kaleidoscopic change, a colossal oblivion is perhaps a consequential corollary.

A short hundred years ago some of Nature's vastest forces remained undiscovered, barely suspected, certainly unexploited—steam and electricity, for example. To-day those two mighty powers have been harnessed, tamed, domesticated. Already the conquest of the upper air seems assured : the sea-depths

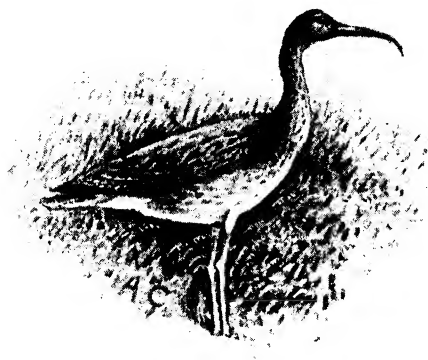


YOUNG CURLEW—June.

have surrendered to navigation. The elements that erst enthralled, are now enslaved : while the sequence of invention proceeds without a check. Day by day there spring on us fresh marvels too numerous to specify, and faster than age can absorb their import. Only a score of years ago, the automobile inaugurated yet an-

other revolution—many of these innovations reacting directly and fundamentally upon our special pursuit. No longer need a day's grouse-shooting involve turning-out in the dark, dressing and breakfasting by candle-light, jogging, say, ten miles in a dog-cart, or catching some horribly early train as of yore. The gunner, along with the rest, takes all these modern advantages for granted—breech-loaders *vice* flint-and-steel, with its cumbrous paraphernalia of powder-flask and shot-belt, wads and caps . . . smokeless powder in place of villainous saltpetre that obscured the landscape . . . cordite that defies Newton's Laws of Gravity, telescope-sights, prism-binoculars, and a thousand other mechanical utilities. Should an inquiring mind pause to wonder how the world ever got along without these things—well, the thought is promptly dismissed . . . with a shudder. Or if, in idle hour, one may speculate on what the next centennial may have in store—better at once abandon a futile quest . . . with a gasp!

How many, nowadays, can recall the irksome process of recharging the old muzzle-loader after every shot fired—an operation that involved about a score of separate actions, some intricate? The ramrod had to be withdrawn; two charges of powder meticulously measured from the flask and tipped into barrels; wads found in this pocket or that, each *bitten* to avoid windage, inserted and rammed home; similar processes gone through in detail with the shot; then the caps to find and fix, finally replacing the ramrod—all this, very often in pouring



MAY ON THE MOORS.

rain! How much nicer to have the cartridges, ready-made, in your pocket? Yet the muzzle-loader served me well for six seasons, 1864-1870.

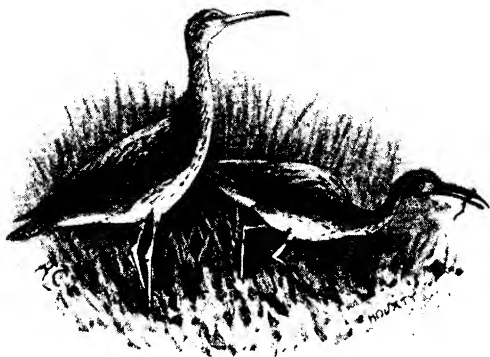
Another item has almost certainly passed into oblivion—the immense advantage that accrues to the modern shooter from smokeless powder. I had forgotten it myself till a few years ago when, having occasion to use a favourite old duck-gun on the coast, and being doubtful of her power to resist the new explosive, I had some cartridges loaded with black powder. The result was a revelation. At once, on firing the first barrel, an opaque cloud of sulphurous fumes filled the horizon, shutting out all further view of sea and sky, game and everything else. One wondered how Hawker used to bring off his brilliant

sequences of rights - and - lefts 'and frequent "cannons" under such conditions? But he did—just as in cricket we are now told that, on the perfect wickets of to-day, Grace would never be got out at all!

But my pen runs riot and must be restricted to our special subject, that of grouse and the moorlands during the past sixty years. Therein equally all conditions have undergone change; men and methods alike metamorphosed beyond all recognition—everything is altered *except* the everlasting hills themselves. At least those great physical features remain permanent, no less beautiful, no less imposing and inspiring. The August heather blooms purple as of old; green bracken lends its charming colour-contrast to every cleugh and corrie; the same old screes of riven rock bestrew the steeper slopes; while above, great grey crags dominate a landscape still glorified by the majesty of silence and solitude. Externally, no salient change in the vast brown bosom of the moorland leaps to the eye; yet none of those few who can remember the moors of sixty years ago but realise a difference the moment it comes to traversing them. The system of surface-drainage has long transformed their surface, solidifying and reclaiming much of the erstwhile plastic and water-logged peat. Where in earlier days the gunner was wont to splash ankle-deep through viscous and semi-fluid substances, he now revels in firm foothold, and can thus keep a roving eye far afield without risk of falling into unsuspected pitfalls, or finding himself suddenly embogged to the waist in sphagnum-camouflaged morass. The far-flung expanses of flat flow and moss which in winter used to form shallow lagoons beloved of wild geese, now yield a moderate subsistence for black-faced sheep (themselves interlopers), and the geese have long sought congenial resorts afar. So universal on the Borders does surface-drainage obtain that to-day scarce any considerable area of moorland retains that pristine marshlike character—only those sporadic spots where the lie of the land, or adverse watersheds, forbid the withdrawal of superfluous moisture. Hence nowadays men may follow grouse year after year without once encountering moorland of the primeval type. Nor, be it

admitted, is the experience, if met with, an unmixed joy. There survive here and there spots which neither guns nor drivers can be persuaded to traverse: but these are few and far between.

One minor point. In a utilitarian age it is perhaps akin to heresy to abuse any innovation that is efficient and *cheap*. Nevertheless, the modern wire-fence must be detestable to æsthetic eye—its hideously straight lines replacing Nature's own landmarks of curving contours or winding watercourse.



SPRING-TIME ON THE MOORS.

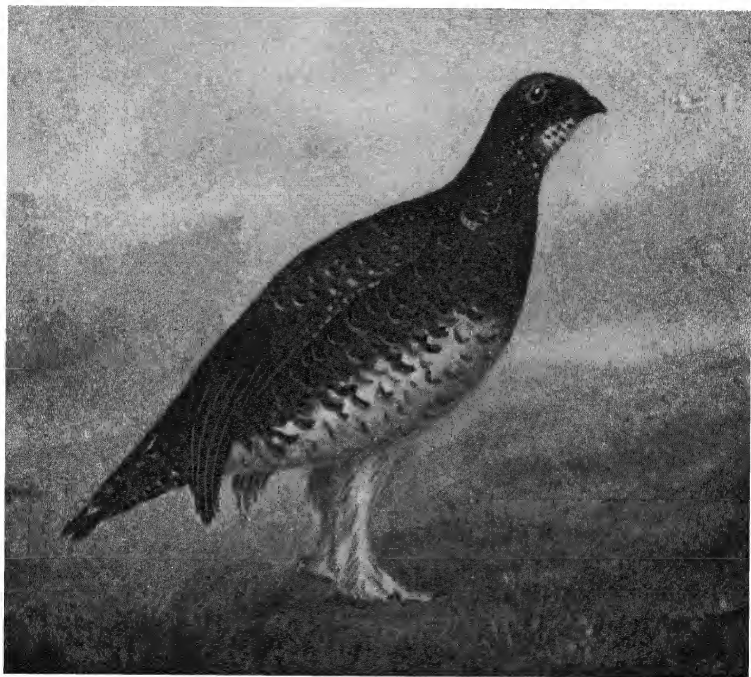
This superficial change in the moorland character has had little faunal effect. The geese have gone, but grouse at once adapted themselves to new conditions which, to them, were probably favourable; while the rest of the moorland forms (so far as records go) remain unaffected either one way or the other. Nor can any definite change in the natural habits of grouse during these sixty years be safely stated. They are often assumed to have become wilder and more wary. That may be so—especially where heather has been unduly reduced by burning or impoverished by overstocking of sheep: though I doubt it in general sense, for very distinct recollections remain in my mind of how wild grouse were in my earliest days; that is to say, that even on the Twelfth most well-grown broods were utterly unapproachable; nor could they be

dominated until each had been followed up again and again and finally "broken" by that style of hunting-craft which long ago I essayed to describe both in the *Field* and subsequently in my books on the Borders—descriptions which I cannot now improve.

The case remains the same to-day. Upon ordinarily broken moorland, the feat can still be achieved with the wildest, but it prepostulates the possession both of first-rate hunting-dogs and infinite patience. Moreover, the work involved is hard in the extreme, and totally out of harmony with modern ideals, since after August, it may only mean, say, five or six brace bagged during an equal number of hours' hunting—a reversion to old Esau which nowadays seems unthinkable!

The hunting-dog, like all else, has suffered transformation. In those earlier days I cannot recall ever seeing a retriever on the moors—nothing but pointers and setters, the latter for choice, pointers being less hardy and apt to succumb to extreme severities of weather. I recollect a dear five-year-old bitch, "Joy" by name, actually dying on the hill during a December blizzard: another, though carefully tended at night, was found dead in her kennel next morning. The only drawback to setters was that in very hot dry seasons they suffered more from heat and lack of water. On the other hand, being of broader and more human intelligence, setters made most efficient retrievers, provided they were entered to that special service from puppyhood. Then the work came, as it were, natural to them, and it always seemed to me a thousand pities that that invaluable trait in the character of a setter was so seldom availed. A retrieving setter did the work of two dogs and, in most cases, better than the substitute! All this refers solely to the earlier style of hunting and is quite out-of-date to-day. For modern grouse-driving, the retriever is all one needs, nor would that work be suitable to a setter. Still, the loves and the joys of those earlier years—and decades—grow into a man's life: they cannot but survive even though merely to mention them may appear, as it were, a reproach to methods that have superseded them. It is not intended so.

Hunting-dogs of the above type—dogs, moreover, under complete control—were none too common even thirty or forty years ago. To maintain a team of first-rate setters year after year in constant sequence, was never a light undertaking. Their possession bespoke infinite care and skill both in

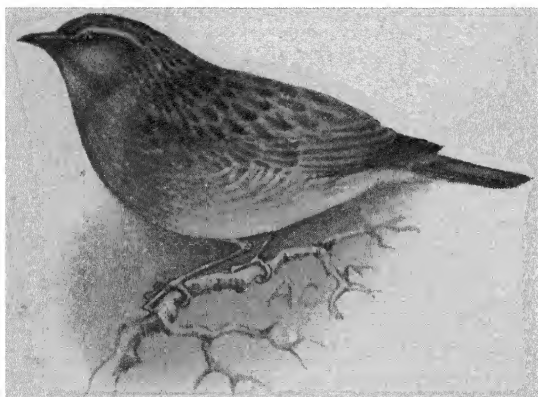


A CHEVIOT GROUSE. Goldsclough, December 10, 1892.

(Shot and Sketched by Alfred Crawhall Chapman.)

selecting and afterwards in preparatory training. Too often days on the August heather, long anticipated as a living joy, degenerated into a melancholy exhibition of dog-breaking—a function which should have been completed long in advance. The Twelfth is no time for that. Small wonder that the hunting-dog fell into disfavour, almost into desuetude. Many

of the younger generation, it is probable, have no adequate conception of what first-rate dog-work used to mean and was capable of achieving. Their ideas must often be based on the pictures and prints of those days—say Edwin Landseer's—wherein Don and Ponto steadily point and back each other in knee-deep stubble, and with a covey of partridges beneath their noses. With grouse (save a few backward broods) that would rarely occur, even in August: for the red grouse is of bold and intractable spirit, little apt to share the confiding disposition of the more homely partridge. Given good covert



SEPTEMBER ON THE MOORS.

—as on the moorland—the partridge never becomes really difficult of access; whereas it often haps on the Borders that grouse, even on the Twelfth, are as wild as partridge in November: while, should the day be wet, they may be seen sitting bolt upright, like so many champagne bottles and challenging the gunner to approach within 300 yards.

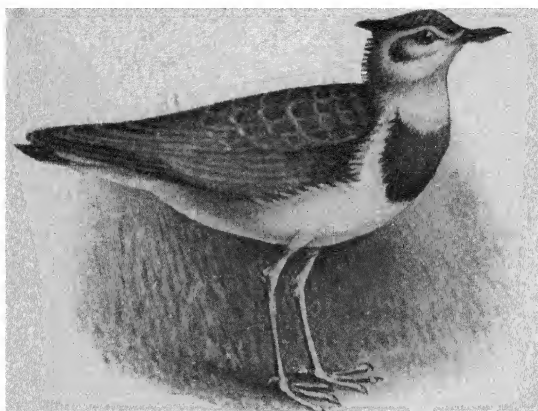
'Tis but a crude idea that associates game-shooting over dogs on later lines, with the "Don-and-Ponto" standard of old. However wild they be, grouse can still be secured by skilled dog-work—given the right type of dog and the field-craft that knows to exploit canine resource. Its methods and devices are quite too varied to recapitulate; but the said craft excludes all such primitive notions as point-shots in open heather. The

ethics of sportsmanship, equally with these in every other branch of human activities, vary with passing periods—perhaps for better, perhaps for worse. Modern standards demand the accomplishing of far more, and in far less time, than satisfied our fathers. That change inevitably reacts upon the gunner's attitude towards game. Whereas, a generation ago, that attitude was rather a passion for intimacy and close familiarity—even affection—since the hunter “loved game as though he were the Father of it”—his successor can scarcely take more than what may be assessed as a coldly official view, since game for him has become little more than a target.

One's first grouse, one's first salmon, or stag, or wild goose, or other notable achievement, must ever remain a cherished memory. My own dates back to the Twelfth of August 1866, while learning the rudiments of the art of shooting with a typical sportsman of the old school, my uncle, George Crawhall—the mentor to whom I owe the best of grounding in field-craft. Deep in the heather beneath Pero's nose crouched a grouselet; in his anxiety that I should score my first, my uncle took it up and released it by hand. That absurdly easy shot I missed gloriously, but killed with the left when the covey rose at the shot; and bagged two more, all three adults, on that day. Since then I have harboured a secret joy that the real start was not quite so ignominious as kindly intended. As some excuse for shooting cheepers at all, it was then the custom to secure enough to make a “pout-pic” for dinner on the Twelfth.

From that period onwards throughout my 30-odd years devoted to dog-hunting exclusively (followed by another thirty serving a second apprenticeship!), a main strategic objective was so to work one's ground as to concentrate the grouse in favourable “killing heather,” especially towards evening. Then, however unapproachable they may have been throughout the day—often hopelessly so—still, when broken and scattered, about the feeding-hour these impossible grouse seemed almost at our mercy. Oft one felt surprised at the potency of human Dominion. But of grouse-strategy with its varied schemes, I scarce dare write for fear of the risk of repetition.

"Subscription Moors."—One other transient method of moor-shooting—in my view the least worthy—was the vogue of Subscription Moors, the system of which may be exemplified by a single instance—that of the famous Bowes Moors. On the Twelfth of August 1872, no fewer than *thirty* guns "broke cover," as the newspapers put it, each shooting separately over dogs. No less than 1099 brace of grouse were killed, the highest individual score being $85\frac{1}{2}$ brace. Five guns exceeded 50 brace, six others 40 brace—so that Hawker's "bungler"



YOUNG PEEWIT. Houxty, May 29.

can't have been out that day! Amidst ubiquitous armies of prowling gunners, the wretched grouse may well have become demoralised. No sooner had they run the gauntlet of one shooter than they must have flown right in the face of another!

But, after all, the great change during these sixty years has been the almost complete supersession of the once universal system of the Chase, in favour of Driving that is now equally universal. To discuss or compare the merits of the one or the other is mere waste of time—not worth a penful of ink. Already the subject has been thrashed out *ad nauseam* and every aspect, useful or other, has been formulated from either side. The change, moreover, was imperative—in a sense, evolutionary. For it followed consequentially upon the altered

conditions of this country and of country life—social, agricultural, financial, in the widest sense of each.

Again, the vastly increased facilities of travel had placed regions formerly remote and practically inaccessible, almost at our doors, both at home and abroad. No more striking illustration of the last fact need be sought than Colonel Hawker's graphic picture of the grouse-shooting expedition he undertook in 1812. The journey as far as the county of Durham entailed an expenditure in time and money alike that would take a traveller nowadays to the Great Sahara! He then proceeded to put up (without leave or licence from anyone) at a little ale-house in the midst of the now famous Bowes Moors, and was quite pleased to kill *one grouse* where thousands have since been shot in a single day. This was on 29th October, and the Colonel adds: "In August it is common for a bungler to kill his eight brace in a day."

This, however, is an under-estimate, since within my own knowledge double or treble the number stated were often secured by a skilled gun. On Twelfth August 1827, my grandfather shot 28 brace to his own gun—a single flint-and-steel that weighed 6 lb., and with a barrel 3 ft. 9 in. long, calibre five-eighths of an inch, equal to the 20-bore of to-day. That venerable firelock I still possess. This bag was made in Hexhamshire, Northumberland, not very far from the scene of Hawker's classic expedition. In those days of limited locomotion the pursuit of grouse was virtually confined to residents in the immediate neighbourhood of the northern moors, nor had sporting-rights much, or any, pecuniary value. How different is the case now, when every barren acre that may—even presumptively—hold a grouse is sedulously assessed for rates and taxes.

The change from hunting to driving fell with startling abruptness. There intervened no graduated evolution; rather it resembled a landslide. Within a decade or two the ancient craft of the Chase—the craft of Nimrod, a "mighty hunter before the Lord"—which had epitomised our human Dominion over the lower creation since history began, was submerged,

superseded, and relegated not merely to oblivion but often to derision and occasionally to opprobrium.

Well, ancient systems do run their course, and 'twere silly to repine. Still, it is small wonder if the "Lone Hunter" of old did display some sense of resentment when made the butt of cheap invective and scathing diatribe. Equally, on the opposite side, the leaders of the New School had long been subjected to criticisms quite as ignorant and as illogical. Action and reaction are equal, and the pendulum swung too far either way. It amuses to recall—but strictly "without prejudice," as the lawyers say—some of the philippics of those days. At first it was the Disciples of the New Cult—that of the "driving-line," with butts and beaters, flags and flankers—who for years formed the favourite objectives of journalistic invective and stinging satire.

For them, it was perhaps an unfortunate coincidence that the simultaneous development of hand-rearing with the adoption of driving, should have led to an abnormal increase in the quantity of game thus obtainable. Phenomenal "bags," such as then were first recorded, lent themselves to these pleasantries in print, and the pen of the ready-writer was quick to exploit a popular theme. The turning-point was marked by the publication of the *Badminton Library* in 1893. That work, in sober and impartial terms, summarised the history of a revolution which had already changed the cynegetic world. One need not agree with its arguments; but, right or wrong, those arguments at least reduced the flood of reckless and rubbishy screeds that had raged for a decade to the semblance of sweet and tempered reasoning. That was not the case with a subsequent series, entitled "Fur and Feather," which, a few years later, essayed not merely to knock the earlier ideal flat, but to trample on its remains! Such a standpoint, nevertheless, could never be regarded either as courteous or becoming—far less as justified by fact—towards a system that had served our forefathers for generations, and which they had raised to the level of a High Art—a definition that can never be applied to the more mechanical methods that have superseded it. All those

who did not at once embrace the New Cult were contemptuously classified as "pot-hunters"—rather stupid abuse, and inconsistent to boot, having regard to the net results? Equally inapposite was the inference that the Old School knew no more than to "potter about after an old dog." For all dogs are not old; they are not born old; and personally I would as soon shoot over a ferret or a guinea-pig, as over a pottering dog in a big country.



GROUSELET—EMMETHAUGH, North Tyne, June 18, 1927.

The only dog suitable to the "Fur and Feather" authorities would be of the electric type!

No, the dog to my mind has always been the resolute tearing two-year-old, with free shoulders and swinging stride, who covers the hill like a racehorse—the sort that is apt to bring some modern keepers' hearts into their mouths, and paralyse their five wits lest "the brute" should run the game off their sheet of the ordnance map. Our ideal may be a bit headstrong. That is not necessarily a drawback. It may mean that the dog knows—or thinks he knows—as much as you, and the man has not mastered his *métier* who is too proud to learn from a dog. For choice, select a second-season setter who, in

his first year ran regular riot, snapped at young grey-fowl, barked at grouse and ran "fur" as far as he could see it. There you have *raw material* that *may* be worth the making—or it may not. I guarantee nothing. All depends on the master. But be just; of two things one. Abandon the hunting-dog for good and all, if you will; but don't, please don't insult his memory.

Possibly, ere that memory shall have been closed down in total oblivion, a few remarks on the hunting-setter of the past century may be appropriate—premising that they refer exclusively to that specialised type which, by long selection and training during generations on moorland, had developed to a point as nearly approaching perfection as human limitations permit.

Nowadays one sometimes reads rhapsodies about "the pleasure of watching good dogs work." Though almost stereotyped, the phrase is equally vacuous and misleading. For it conveys an implication that the merit of good work is purely canine. That is not the case at all; for, unless the "good work" is ambilateral, the true gauge of its merit has not been so much as conceived—much less attained. To train any intelligent dog to hunt mechanically—that is, by quartering his ground with meticulous precision—as though moorland lay in squares like a chess-board—is as easy as shelling peas. To inculcate in that dog the higher arts of hunting-craft—say, for example, that he select one such "square" and ignores the rest—is the beginning of artistry. That is an initial first step. There follows the establishment of mutual confidence and the sensed necessity in the canine mind of co-operation in a joint enterprise. The setter possesses precisely those essential qualities which his master lacks: but it is the master alone who can develop those auxiliary resources and bring the dual powers—those of instinct and those of intellect—into fullest fruition. Dogs are not automata, though too often regarded as such—a fatal error which dwarfs their capacities. Whether the major merit of success accrues to the human or to the canine element in a mutual co-partnership, is a problem that varies individually. Probably, as often as not instinct should be adjudged the

winner—on points: but, in the *ultima ratio*, it is to man—to “hunting man” with his controlling power and master-mind—that any supreme degree of success was ever due.

In time, with practice and patience, dogs of first-class calibre become not merely subordinate auxiliaries, but quite capable of acting independently. Thus they can be deputed to hunt, unaccompanied, a stretch of country—say one of the big rough enclosures that fringe the moor. Such space a fast setter will range in half man’s time, while his watching master smokes a restful pipe by the gateway: but ere he leaves that stance, he has full confidence that not a covey of hill-partridge, not even a lone young blackcock, has been left unfound.

In a big country where game is scarce and scattered, few and far between, it was often advisable to run two dogs at once—which term does not mean *together*, since the pair may be working separate hillsides, hundreds of yards apart. In such case (and indeed at all times), knowledgable dogs will constantly and habitually look to their master for signals *by hand*: but, in case of necessity, two whistles, pitched in different keys, should be used. Each dog comes to distinguish the sound of a signal addressed to himself, and to ignore those intended for the other. The whistle, by the way, should only be used exceptionally, since the less noise the better.

One more example of how canine instinct may be developed to a level equalling reason. An experienced setter, when set to hunt to leeward, will spontaneously so extend its range of ground *outwards* as to be, in effect, hunting backwards—that is, working the area between itself and its master.

One charming test of mutually established confidence—(though not always a criterion of quality)—is when one’s dogs instinctively recognise their master as Supreme. The keeper feeds and tends them for weeks, possibly months: yet at once, on the appearance of their master, for those faithful creatures no other being exists on earth!

Our whole subject is frankly out of date—almost fossilised! Yet has been here granted a half-grudging space as thoroughly

appropriate in a book of Retrospect. Otherwise, its intrinsic interest is worthy rather of a volume than a paragraph. Fortunately such volumes already exist. There is Colonel Hutchinson's classic work, and another admirable example in *The Scientific Education of Dogs for the Gun*, by H. H. (London 1890), one sentence from the Preface of which may aptly be quoted:—"After 37 years' enthusiastic study, I continue learning every day and am convinced that no man has yet discovered, or probably ever will discover, the extent to which the instinct of animals, particularly that of the Dog, can be cultivated and improved into a Reasoning power little inferior to that of an educated man."

Propos, but alluding to totally different subjects, to wit Ants, Sir John Lubbock wrote: "Their mental powers differ from those of man not so much in kind as in degree" (*Ants, Bees and Wasps*).

Fain would I further refer to an article of my own in the *Badminton Magazine* of 1890.

[IN MEMORIAM]

MY DEAR DOGS

Pointers.—Bob, Nilo, Dan, Shot, Pero II, Joy, Sam.

Setters.—Dash, Luce, Rap I., Morris, Sandy, Jock, Saxon, Rap II., Rap III., Nell, Cora, Hector and Fiera, Jupiter and Juno (*Jove* and *Shu* for short), Rap IV., Kate, Gyp.

[In 1906, I lost an invaluable kennel of setters—accidentally poisoned while out at exercise. I was in East Africa at the time and have never since been able to remedy or counteract that disaster.]

There were others; but several of the above represented well-nigh the acme of canine merit—the truest and most faithful friends that heart of hunter could desire. To-day I still possess one inestimable Treasure.

Sentiments such as these may interest in retrospect, but are idle in practice. They belong to a past epoch. Be the change for better or for worse, it was inevitable and irrevocable. The altered circumstance of the age had already signed the

death-warrant of the styles of sport pursued by our fathers. They were as dead as the dodo and to shed posthumous tears were a waste of time and energy, not to mention ink.

Grouse-shooting under the earlier dispensation was largely a sort of one-man pursuit in the wilderness. To-day it is rather transformed into a social function—a brief transference of Mayfair into the moorland. Well and good, but in a retrospect there can be no harm in recalling earlier phases. Nor is classic authority lacking to show that the ruder school had its adherents in long-past epochs. Thus we read that when, in heroic age, the storm-tossed Trojans sought the Latian shore and slew confiding stags by the dozen—*bis septem ingentia corpora*—yet young Ascanius, son of Æneas, found that :

“For him too peaceful and too tame
To crumple up the driven game ;
He longed to face the gnashing boar
And hark the tawny lion’s roar.”

ÆNEID IV., Conington’s translation (adapted).

Nor is the heroic sentiment dead to-day. Ascanius serves but as a prototype, since many of our most brilliant exponents of modern gunnery are equally distinguished in the wildest hunting-fields of the world. Some who, at home, may count by the thousand head in a day are among the first to undertake risks in the roughest of the raw, content with the chance of, say half-a-dozen hard-earned trophies in a month. Personally I subscribe to the Arab doctrine that “The time spent in the *Chase* is not counted in the Span of Life.”

No, the cult of Esau has not passed away, nor will it ever pass ; though its disciples (in these crowded islands) are wont to lie low, pursuing their craft unseen, and even unnoticed in the daily press. In the wider world beyond, our “white hunters” flourish exceedingly, nor could Nimrod himself have brought venatic science to higher perfection than that of our compatriots in Africa or India. Esau, moreover—so we are told—is but a figure of yesterday, in historic sense. Ages earlier, the instincts

of the Caveman had been implanted in our human nature, the accumulated inheritance of thousands of generations.

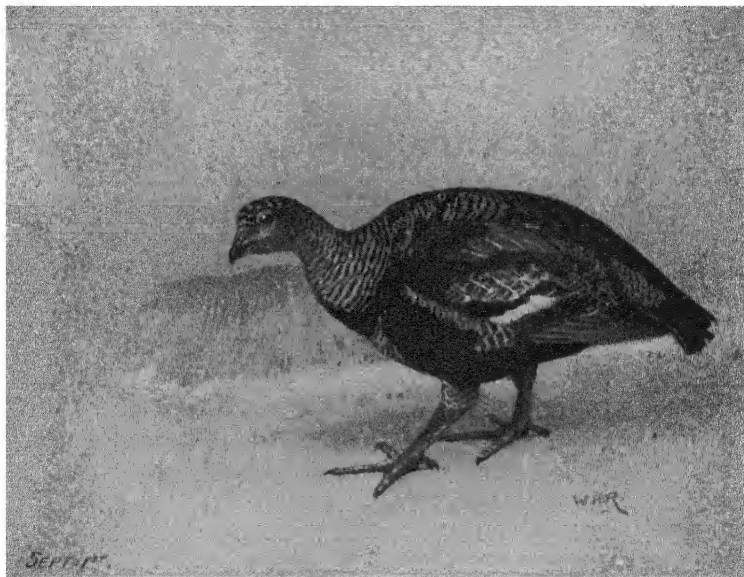
One aspect of the changed condition of field-sports it is legitimately permissible to regret—that is, its bearing on the outdoor study of natural history. The self-hunter of old was necessarily a field-naturalist in embryo, since a working acquaintance with the life-habits of his quarry formed an integral component in his armoury. True, in the first instance his observations were limited to the immediate objects of his pursuit, but the habit of observation grows—it is infectious and contagious, and once aroused will continue to expand and develop while life lasts. Therein lay the genesis whence evolved the field-naturalist. Even one generation ago the majority of field-sportsmen took a living pride in combining the twin qualifications. To-day no such stored knowledge avails to help. The Gordian knot has, so to speak, been cut when individual initiative, field-strategy and tactics have been replaced by a sort of mass manœuvre. One regrettable result is that the hunter-naturalist has become, certainly not extinct, but relatively rare and in corresponding degree one of the twin pillars of zoology has suffered appreciable loss.¹ A priceless treasure has been thrown away.

Accentuating the sentiment (and incidentally landing me a “backhander” on the jaw!), I recently read this astounding gem in the modern literature of grouse-craft. In a book which tells of more grouse being killed in a day than this Author shoots in a decade, it is written: “The practice of driving has been most beneficial to the stock, since it brought to book the tough old grouse which used, in the old days, to live so long

¹ Zoology, that is, as limited to field-observation of wild Nature. One instance of the artificial methods of modern research may be specified. When the Parliamentary Grouse Committee desired to learn the natural history of the grouse, instead of studying their subject on its native heather, they had a few dozens of captured grouse sent to London and placed under the observation of a gamekeeper who had never before seen a live grouse. Certain minor details might, no doubt, be more easily ascertained thus than by observation in the wild; but, with that exception, the plan was a good illustration of “how not to do it.” The result is now clear to see.

that their spurs became true weapons of offence, enabling them to drive and harry the younger birds in the breeding-season, and so damage the breed." . . . It leaves one speechless. From motives of the commonest Christian charity, the name of this egregious scribbler shall remain unwrit.

One small personal memory may deserve record. The incident occurred during the interregnum—shall I call it the

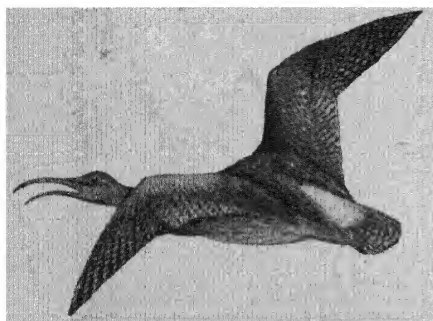


YOUNG BLACKCOCK. Shot on First of September.

unregenerate period, while yet self-reliance (or was it conceit?) and the pride of dog-control still formed main factors in field-craft?—and long ere the joys of the “incoming shot” had dawned.

It befell towards evening, after a long day on the moors with my dear old friend and co-author, the late Walter Buck. Between us and our quarters in the valley far below there intervened a single semi-isolated hill. B. had elected to take a shorter cut homewards down a glen which flanked this hill on the right; meanwhile, I made a detour around it with the

hope of adding a final brace or so to the bag. This last hill proved to be full of grouse, and with a strong breeze in our faces these grouse all swung round right-handed to regain the main moors behind. Thus it befell that they passed straight up the glen down which B. was pursuing his homeward way—



THE MINSTREL OF THE MOORS.

Whose wild-rippling cry heralds the spring,
blending with the music of countless rills
—dancing waters that pour from the
thousand hills.

and he was prompt to realise his opportunity. Shot after shot rang out, and watching from the higher ground above I could see, as each pack swung backwards up the glen, grouse after grouse crumple up to fall far below. On our rejoining it transpired that B. had gathered eleven grouse in some four short minutes—probably more than during the whole arduous day's work preceding.

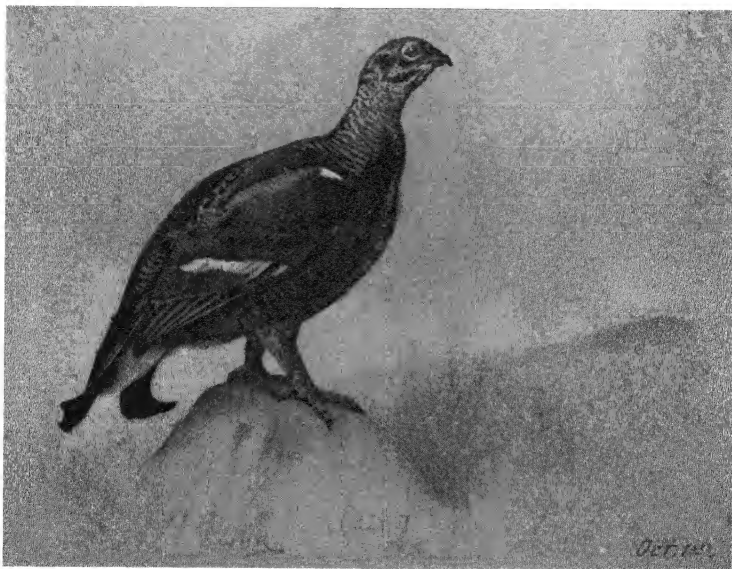
Undoubtedly it was a rare and exceptional incident; yet

B.'s intense satisfaction came as a yet rarer revelation to me. "Gladly would I slave for hours," he said, "to get just such three minutes as those, at birds coming in fast and high overhead." So I reflected there must be SOMETHING in Driving after all?

GROUSE DISEASE.

The problem of grouse-disease (or what is popularly understood by that term) appears to be unfathomable. Almost it may be questioned whether, during the last forty years, we have advanced one practical step forward in our knowledge of the blight—a step, that is, towards its effective treatment and remedy. True, we have the carefully elaborated Report of the Parliamentary Grouse Committee of 1905-1911, which essays to diagnose its multiple causes; but that work, while a triumph of skilled and patient research, appears to be rather of scientific

interest than of practical utility. On the Borders, at any rate, there are to-day whole hill-ranges where the status of grouse is worse than ever before. That, of course, does not apply to all; but moors which formerly yielded, say 300 brace, now barely carry a breeding-stock. Comparative figures were easy to adduce, but figures are notoriously tiresome playthings; hence I prefer to relate an amusing conversation with a moorland



YOUNG BLACKCOCK. Shot on First of October.

gamekeeper, which is only too typical of the situation. In answer to a question of mine why he had sent me no bird-notes of late, his reply was that he had observed nothing worth recording. Then, suddenly, as an afterthought: "Oh, by the way, I *did* see one rare bird last week." . . . "What was that?" . . . "Well, it was a grouse!" This, on a moor that used commonly to yield 60 or 80 brace and upwards in a day's driving.

In general, the Genesis of grouse-disease may safely be

summarised as "the price we have to pay for maintaining a stock of moor-game at a higher level than Nature designed."

Forty years ago I essayed to set out in the *Field*, in the terms just cited (since incorporated in both editions of *Bird-Life of the Borders*) my views and experiences to that date; and the long interval has neither added to nor materially altered the conclusions then reached. Whether there exist cryptic causes, as yet undiscovered and unsuspected, that conduce to grouse-disease or otherwise, at least (as above suggested) the most obvious explanation lies in human greediness.

From the modern vogue for "quantity" there results an attempt to exploit Nature on the moorlands beyond the fixed ratio of economics—alike as regards both grouse and sheep.

Notoriously the system of Driving, combined with greater attention to the heather-crop, *at first* vastly increased the stock of grouse. But the insuperable limit—even at this *second* standard—was reached . . . and overpast. The present melancholy state of the heath-clad hills may thus be due solely to that fabled attribute of the Dutch, who are said to "give too little and ask too much."

THE TWELFTH OF AUGUST 1927.

The Twelfth of 1927 shall have a niche to itself, not merely because it happened to be the Author's sixty-second, but chiefly because it rejoiced eyes wearied by long sequence of sorry blanks and melancholy memories while, year after year, grouse—the chiefest ornament of the mountain-land—seemed gradually to be disappearing from their ancestral domain. Once more we could revel in the grateful spectacle of great defiant covies, such as we had not seen for ten or a dozen years. Already, a month before the Twelfth, the young were as big and as strong as their parents. Though in actual numbers a mere fraction of their pre-war abundance, yet these great pelting broods at least promised a revival of joys already well-nigh forgotten.

By mid-July the prospect seemed assured; yet well we remembered other years when the fairest promise had been suddenly swept aside, as it were at the eleventh hour, and the rosiest forecasts falsified.¹ This year there occurred no slip 'twixt cup and lip; but it goes without saying that great strong covies in all the glory of health and vigour are not to be had for the asking, and the delight of difficulty was enhanced by the ceaseless rains of a diluvial summer. An excellent index of the conditions on this Twelfth is afforded by the fact that never once (nor on the 13th either) did I fire the second barrel: so the count worked out at 13 grouse in 16 shots, all singles.

Such a total may seem almost too trivial to record. It *is* trivial—even for me!—though by no means my lowest. Still the record may have a bearing in another sense. The vogue for “big bags,” with maximum results in the minimum of time, has infused an entirely new standard into the ethics of shooting. But phenomenal results may not in themselves provide the truest criterion, either of the full joys attainable, or of skill in moor-craft—together with the hunter's pride in that skill. Results, after all, must be measured by opportunity, and quite conceivably the gauge of a few brace where each unit may represent a minor triumph in tactics or strategy, can induce a warmer sense of self-gratulation than is inspired in another who counts by hundreds?

¹ Thus in 1922, when, up to mid-July, all seemed to be going well, suddenly, and from some cause quite impalpable to us, almost the entire crop of grouse perished when already three-quarters grown, and the whole season proved the worst within my memory. Almost precisely similar catastrophes befell both in 1918 and 1924, except that in each of those years the “wash-out” of the young broods occurred a month earlier, about mid-June. In 1919 and again in two subsequent seasons the young grouse disappeared, as by magic, during May—that is, shortly after being hatched. In none of these cases was any general cause perceptible; nor were the parents affected.

CHAPTER II

THE MOORS IN MID-WINTER

I.—WILD ADVENTURES IN SNOW.¹

IN the heart of the Cheviots lies a sequestered valley, surmounted on three sides by a rampart of heather-clad hills that reach elevations of 1000 to 1500 feet. In length the main valley may extend to two or three miles, and is supplemented on either flank by lateral gorges, shaggy with self-sown alder, birch and bracken, that stretch far up the lower slopes. One charm of this spot lies in its inaccessibility. Ten or more miles to the southward, a branch line—a sort of toy railway—runs, or limps across the moorland; while northwards, on the Scottish side, a similar three-trains-a-day service lies a trifle further away. In winter—especially in severe seasons such as we are here considering—both these approaches are liable to be laid off, snow-blocked, for days on end. Our valley is then cut off from the outer world—how delicious, provided you are on the spot! Otherwise, the effort to gain the Elysium may cost tears and gnashing of teeth. Maybe 'tis worth all that.

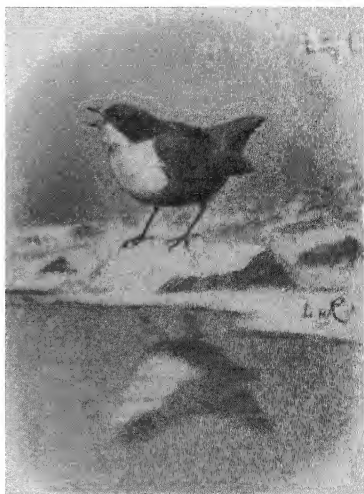
The first of the two occasions I propose to describe occurred—well, it was fifty-four years ago, yet the memory remains vivid as of yesterday. During the early days of December heavy snow-falls had effectually blocked all access from the southward; but on the Seventh of that month the northern track was reported clear to within five miles of our objective—clear, that is, by driving tandem some ten miles along the narrow pass-way excavated by snow-ploughs and with six-foot snow-walls

¹ This and similar yarns were indited in the long-ago; but always suppressed—as a *monstrum horrendum cui lumen ademptum*—lest their truth should be doubted, a contingency I need no longer anticipate.

standing vertical on either hand. The last few miles, we (my brother J. and I) did on foot, carrying our gear, till we met the keeper, old Ritchie Ewart, at the fell-gate. Under such climatic conditions, the bulk of the moor-game are driven to assemble on the lower slopes of the hills and even grouse are constrained by the rigour of the hour to assume arboreal habits, perching on birch and alder to feed on the buds, or on the red haws of the thorn-trees. The first

shot, nevertheless, was at a pair of mallards, springing from the swollen burn and both secured, though only at the cost of a knee-deep crossing through icy waters. The glass revealed several packs both of grouse and black-game, some on the sheerer slopes where strong winds had left patches of heather exposed; others perched on birches or thorn. All were wild and vigilant to the last degree, the only possibility of access being either to stalk a marked pack from some

ridge above; or, alternatively, to organise a series of little pop-drives, with the chance—often remote—of a single shot on each—all this, it will be self-evident, involving severe labour. The exact sequence of this day, however, shall not be recapitulated in detail; chiefly because I kept a more careful record of a similar venture in the same valley seven years later, presently to be described. The net result, when dusk fell, amounted to six-and-a-half brace grouse, two of blackcocks, two mallards, and a golden-eye duck; then, burdened with these, we essayed the homeward journey to our quarters—three miles over a 1000-foot moor in full two feet of snow. The open track was so completely obliterated that, in the darkness, we soon



lost all trace of its direction and presently were floundering about, often waist-deep in drifts and snow-wreaths. This, after the antecedent labour of a strenuous day, proved almost too much for our strength—at least, speaking for myself, I remember flopping down in the snow for a rest. Both my companions urged that to stop was to perish, and possibly they were right, but for an extraneous incident—may it shock no susceptibilities to relate! We had with us a bottle of whisky, intended to serve over the two remaining days of the shooting-season. Well, we drank it almost to the dregs that night—drank it *neat* from the neck—and whisky was more potent in those days. Yet no ill-effect did we suffer, either at the time or next day—indeed, it lent new vigour to exhausted muscles and enabled us to master that long, long uphill grind through the merciless snow. Such a deed under normal circumstance might well-nigh asphyxiate; in the conditions of that night I remember the strong stuff going down sweet as cream. Next day, moreover, we both shot in our top form—so it was clear no ulterior results had ensued. For the two days, the two guns had put together exactly 20 brace of moorgame and wildfowl. How small such a result appears nowadays on paper! Yet what labour (and what joys!) it had cost to amass!

That the risks run in these snow-traverses of moorland in mid-winter are very real is shown by an incident which occurred that same day. A man, endeavouring to reach a station on the little railway to the southward, totally disappeared; nor was his fate known till three weeks later when, on the snow melting, his remains were found in the bed of a steep-sided hill-burn. Into this snow-masked death-trap the luckless wayfarer had evidently fallen unawares, and the avalanche of snow that followed his fall had overwhelmed him.

II.—CLOSE OF THE SEASON OF 1882.

The snowstorms that, on the Borders, inaugurated the month of December 1882 were memorable enough, though without quite deserving such extravagant descriptions as local

newspapers induced their readers to believe—"Surpassing in violence anything within living memory," and so on. For *thrice* within the preceding decade we had endured climatic cataclysms fully as severe, besides others almost as bad. No blame is imputed to the overwrought journalist who, working against time, burns the midnight oil to catch some "special edition" in the "wee sma' hours"; it is so much easier, in the quiet of one's own study, and with tabulated records in diaries that cover decades, to compare and correlate each such hibernal outrage.

Well, only four days yet remained of that grouse-season when a letter arrived from our keeper, stating that the ordinary road was snow-blocked, but that he thought, if we came by the mid-day train and went on a few miles farther to the mail-station, we "might get through."

It was 3 P.M. when, on the snow-wreathed platform, Robert met us, looking blue and rueful. His story was brief. The dogcart he had abandoned six miles back in a drift; the horse at a village near by. Thither we proceeded on foot, and at the little inn, after council held, decided to proceed. Darkness was already settling down; the snow lay from a foot deep to six or more in the drifts; moreover, it still drove heavily from the north-east, and we had some ten long miles of a rough moorland road to cover. At the end of a mile—the snow-blast driving horizontal and hardly endurable—my companion W., ill-prepared for such ordeal, decided to turn back. The decision was taken just in time; for scarce had he installed himself at the village inn than in trooped the whole of the passengers from that belated train, which had been brought to a standstill amidst mountainous snow-drifts just beyond the station. W. had secured one of the two available bedrooms!

Meanwhile, Robert and I, hanging on to the horse's lee girths, and so getting what shelter was possible from the blast, plunged ahead through deep snow and deeper darkness. We kept at it, always making good, but the first five miles took three hours to accomplish. Near that point was a cosy refuge where we would fain have rested awhile; but, our clothes, being frozen into boards, a stoppage, even for a few minutes, was inadvisable,

so, like Xenophon in the *Anabasis*, we "pushed forward" the remaining four miles. These proved to be the worst of all, for no vestige of a track was visible, and we even passed the abandoned dogcart unseen beneath the snow. The final stage occupied over two hours, and it was past nine o'clock ere we reached our quarters, after a night's work that stands out prominent among memories of many a tussle with the elements on our Border hills. And, after all, these labours were lost! for a continuance of the storm on the following morning, with the added depth of drifted snow, forbade all access to the higher levels.

Such facts may perhaps appear unworthy of record. The loss of an odd day's sport more than forty years ago must seem a mere triviality? In those earlier days, however, the secrets of bird-life (including that of the grouse), as it subsists under such conditions upon high moorland, had never been told. No book, within my knowledge, so much as alluded to the subject; nor had ornithologists ventured to explore these points at first-hand—my own works still remain the only witnesses. Hence a concrete instance of the difficulties incidental to the quest may prove neither trivial nor inappropriate.

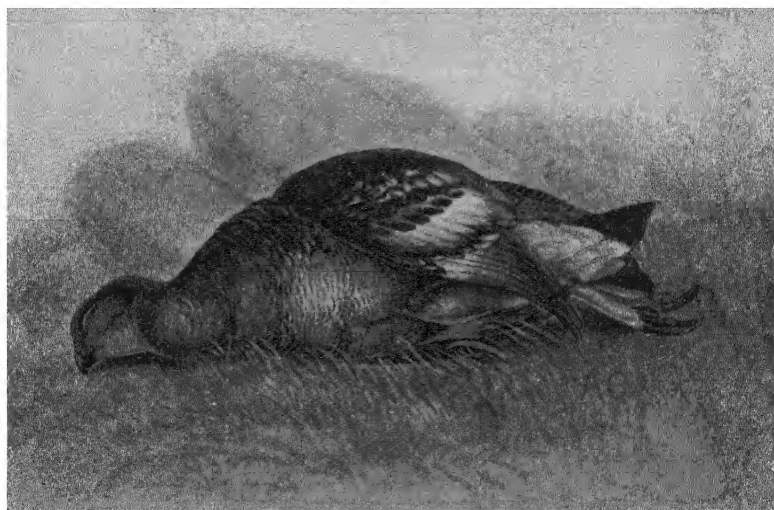
A minor episode of that night remains graven on the tablets of memory—whether worthy of immortality, I cannot tell. At once, on reaching our destination, I had noticed our hostess smiling a mystic and inexplicable smile; but, being myself beyond the speaking stage, had failed to diagnose its cause till she handed me a looking-glass; then I knew. From my moustache, on either side, depended silvery icicles that looked a foot in length!

Next afternoon, simultancously with the failure of my second attempt to ascend the hills, W. arrived, after five hours' passage on the mail-sledge. He had lost nothing; neither had he suffered our trials and tribulations! Meanwhile, however, the keeper, at another point, had succeeded in reaching the moor and returned at dusk with a brace of grouse. These he had shot as they flew from one of those "snow-burrows" described later in this chapter. The site of that particular warren we had observed in a previous winter.

Friday morning (9th December) at last broke fine, and

brilliant sunshine glorified the whole wide snowscape. Cheviot's massive symmetry lay clad in unbroken radiance, while its satellites stretched away, league beyond league, in spotless purity of snow. Nothing save passing cloud-shadows, or the dark contour of crags or scree, broke the uniform beauty and the solemnity of the scene.

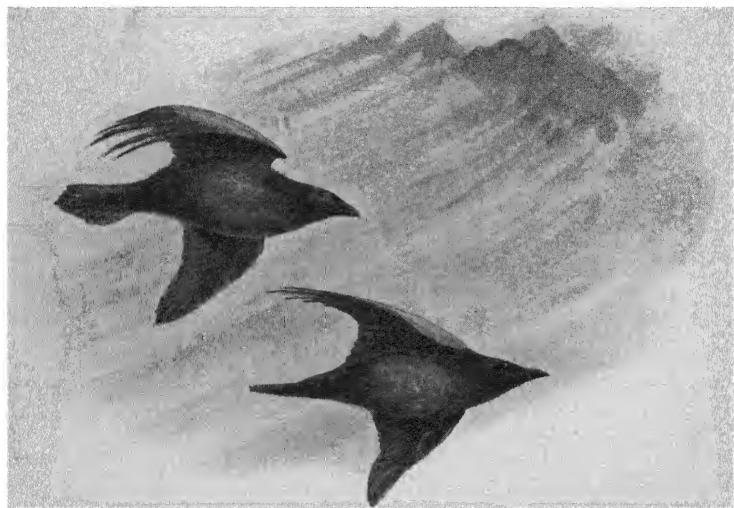
The nearer fells being unscalable, our hopes for this day centred on reaching that sequestered valley already described



GREYHEN (*Tetrao tetrix*). Norway, October 1895.

above; and, as expected, it proved to be the refuge of half the moor-game of all the fells around. Grouse, however, were at first rather conspicuously absent—for a reason to be presently unfolded—but blackcocks in great packs that, at a distance, might be mistaken for rooks, with their attendant greyhens, crowded the boughs of birch and alder along each straggling glen. Before starting operations in earnest against the game, fowling-craft dictated, as a preliminary, to try out the main burn for wildfowl—mallards, wigeon, or golden-eye, driven in from the frozen lochs above. This hour's work proved full of

living interest. From the first bend of the burn sprang a heron almost underfoot, squawking and in superb disarray—a mix-up of long beak, long neck and legs, and huge wings, quite needlessly flustered to find a “gun” right atop of him—herons we do not shoot. Everywhere busy dippers darted to and fro, alighting on the ice-edge to warble a bar of song, or emerging in mid-stream from a dive. They had reason to be busy; for each gravelly shallow swarmed with great spawning salmon. Broad



NOVEMBER ON THE MOORS.

brown backs, huge shovel-tails and dorsal fins clove the current, and around each wallowing pair the waters flew in spray. The scene afforded a striking contrast in wild Nature's ways. While, under the rigours of winter, the warm-blooded tribes are hard set to procure a bare subsistence, here the cold-blooded fish were revelling in the paroxysm of procreative passion! That such an idyll, albeit ichthyic, should have its setting staged amidst semi-arctic conditions—with snow-wreaths enveloping the burn, and great green icicles like hoary stalactites impending the bridal couch—well, it seems incongruous to shuddering human sense.

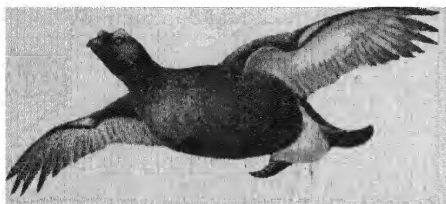
Thrice having to ford the burn to recover a mallard that had fallen beyond it, I took occasion to creep right up to the

very tails of spawning salmon, rolling and splashing, but quite oblivious of my proximity. The dippers, and trout also, hang close in rear of each pair, both eager to snatch any flotsam and jetsam—no blame imputed to either, since the bulk of these swept-away ova are bound to be lost. Except for the dippers, birds of the smaller creation are, at such seasons, chiefly conspicuous by their absence. Alert parties of redpolls and tits among the alders, a chance tree-creeper, robin, or wren are about all one may see. But to-day a cock bullfinch, perched on a snow-laden hemlock, lent the only touch of brilliant colour to an Arctic scene.

After this interlude along the burn, attention was transferred in earnest to the game—the blackcocks still in evidence, guzzling woody birch-tops in lack of more nutritious food; but grouse strangely invisible. No reader need fear that any mere rigmarole of sporting incident shall be inflicted. All *that* is irrelevant, save only as it may serve to elucidate points in Nature's economy. Still, surely it is legitimate to recall that, both on this day and the next—the last of the season—we *did* enjoy those inspiring moments of minor triumphs that are ever dear to memory? The first objective in all such operations is to spy out precisely the enemy's position, with any "advantages" it may offer; then to decide on the strategy required—whether stalking, outflanking, or a pop-drive at short range—the details in either case needing careful working-out.

At once we discovered the secret of the invisible grouse. They were not absent; on the contrary, seldom have greater numbers been congregated in this relatively narrow valley. But all were hidden from sight, deep-buried beneath the snow. On crossing the crest of a steep brae, on the slope of which (beneath the snow) grew long and shrub-like heather, there "bolted" from their burrows, some 30 yards below me, over a score of grouse—not a sign of which had I seen, nor suspected their presence, till first two, and then the rest in a cluster, suddenly flopped out from their hiddenholt. It was the same all along the fellside, almost each abrupt brae sheltering a sub-nival colony of grouse. If approached from below (that is, in full view), the refugees would invariably take wing far beyond range—showing that a good look-out had been maintained,

although not a bird was in sight. On other occasions I have seen afar the head and neck of a grouse—sometimes two—evidently acting as sentries. To-day that precaution seemed entirely neglected. The omission, however, hardly affected our “dominion,” since the binoculars at once detected any broken snow-surface, and in each case such index betrayed a “warren.” Approach from *above* was then easy. On one

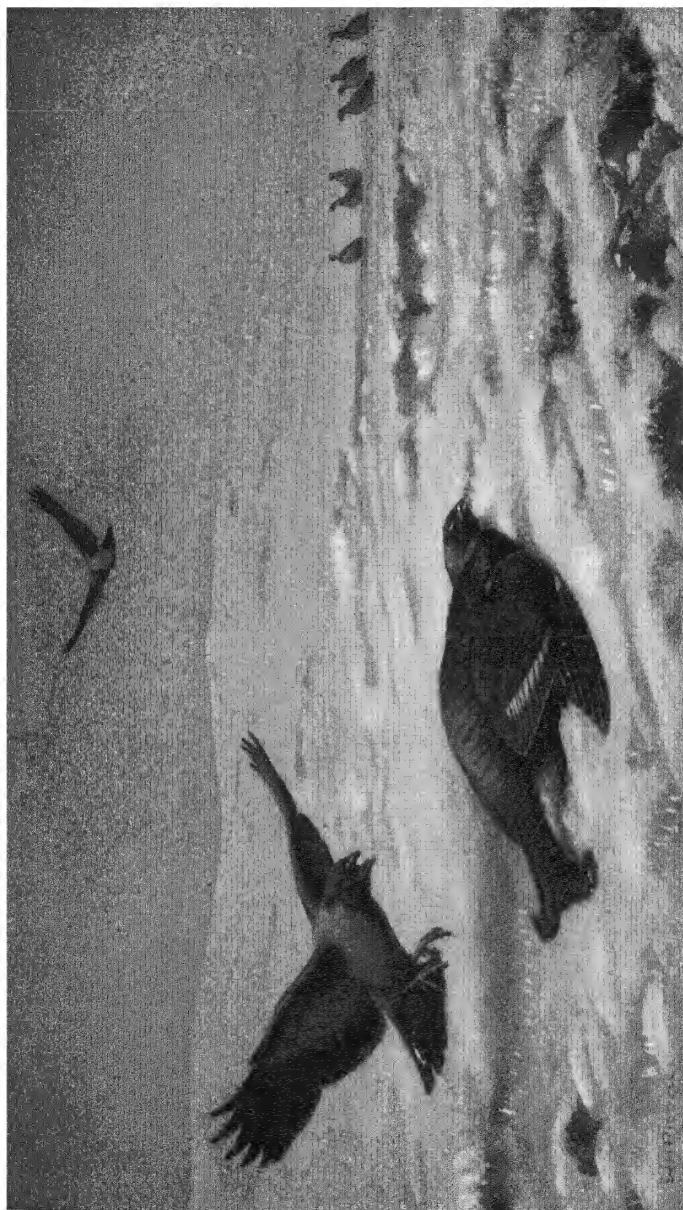


occasion I pushed a buried pack into a sort of *cul-de-sac*, a rocky corner wherein they appeared utterly to have lost their bearings, so that nine fell ere the survivors got clear.

Grouse do not invariably take to burrowing upon the appearance of snow ; but they possess some ancestral intuition enabling them to divine that a particular snowfall is predestined to last long unbroken. In such case, they at once set about systematic excavations ere subsequent frosts shall have steeled the soft snow-surface. Whenever you discern such signs, know, ye shepherds and hillmen, and lay your account for a prolonged storm.

Instructive and most interesting it is, on the melting of the snow (perhaps three or four weeks afterwards), to study the extent and architectural completeness of these grouse-warrens. Far and wide they spread beneath the snow, with lateral chambers and ramifications that command stretches of sweet young heather—thus assuring not only shelter but abundant food-supplies, however prolonged the storm. There depend, moreover, upon these snow-burrowing habits of grouse, important evolutionary and genealogical corollaries ; but as these have already been traced in detail in my *Borders and Beyond*, further reference here would be superfluous.

The blackgame, as usual during heavy snow, roosted in the trees, their favoured quarters being where a clump of alders clustered thickly together in some sheltered cleugh. On the thaw, however, we found where one pack of 15 or 20 had roosted regularly beneath the snow. Their retreat boasted



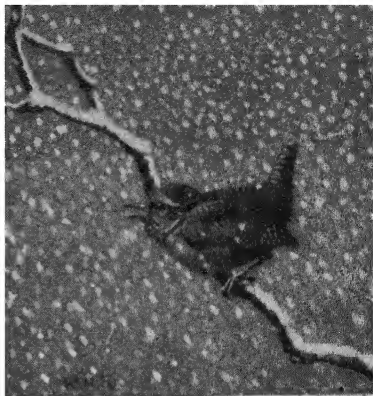
"SPEECHFUL AMIDST THE SILENCES."

The Corby's croak tells the gunner (beyond the hill) all he needs to know.

"Tacitus pasci si posset corvus, haberet
Plus dapis, et rixæ multo minus invidiæque."

none of the elaborate architecture of the grouse-warrens, being merely a single big chamber, roughly circular, and about six feet back from the entrance, wherein all had huddled together—their heads all radiating outwards. Black-game provide no separate “bedrooms”; nor, of course, a *cenaculum*, since (unlike grouse) they never feed—only sleep—beneath the snow. The combined heat of so many, however, creates a vertical upcast air-shaft, rising from the centre of the roof; and the scent which emanates from this must constitute a distinct source of danger. Any fox prowling to leeward would assuredly pick it up: and some years later, after a prolonged snowstorm, we found on a moss near Houxty the mangled remains of three or four greyhens which, as clearly shown by spoor, had been caught and killed by a fox under precisely such circumstance.

It is to note that the observations above recorded date back between forty and fifty years, and at that remote epoch—almost prehistoric nowadays—no conception of these “fossorial” habits had yet dawned on the horizon, whether scientific or venatic. When the facts stated were categorically set out in my *Bird-Life of the Borders* (first in 1889, more fully in the second edition, in 1907), their accuracy was regarded with grave doubt and suspicion. One of our leading zoologists *twice* accused me of misinterpreting the ways of wild Nature. Perhaps his doubt was not altogether unjustified—anyway, my critical friend has full shrift and absolution!—for such is the rubbish that to-day passes current as “natural history,” that it behoves our savants to maintain not only rigid criticism but actual incredulity. Still, I would mildly suggest that that incredulity be tempered



A WINTER SONGSTER.

with some degree of discretion. Such discretion, in the present case, would have avoided clogging the wheels of knowledge.

All that day we had "stuck-in" to our work—scrambling through drifts shoulder-deep, climbing over hidden obstacles, oft tumbling into unseengullies, and so on—till the approach of darkness brought the realisation that physical powers were



unequal to accomplish the long homeward trail. The memory of that ordeal of seven or eight years earlier remained vivid; but the drastic remedy that then proved effective is not one to try twice. Fortunately, a *Deus ex machina* appeared in our friendly shepherd, who proffered hospitality and whose good wife speedily made all snug for the night. Next morning, moreover, our strategical position for further operations was vastly improved, and that advantage we proceeded at dawn to exploit for all it was worth. When at last, after a second glorious day, the lowering sun had closed one more grouse-season, and we set forth on the homeward tramp, the panniers were loaded up with 26 brace of moorgame and wildfowl, and even the moon-flitting owls hooted us a hearty FAREWELL.



ANOTHER WINTER SONGSTER.

CHAPTER III

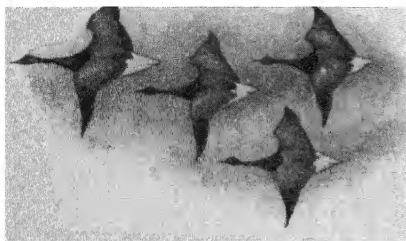
SIXTY YEARS' WILDFOWLING AFLOAT, ON BRITISH COASTS AND OVERSEAS

I.—A RETROSPECT.

WERE a Retrospect of the art and practice of wildfowling afloat (and almost equally the life-study of the fowl themselves) extended to the full century—say to Hawker's day—the history might well-nigh be summarised in two words, "NO CHANGE"—truly a remarkable reversal of the parallel conditions on the moorlands, as outlined in the former chapter! To-day, precisely as when Hawker wrote, the active pursuit of wildfowl on salt water, and equally the study of them in life, is limited to a minute minority; while the great world alongside peacefully pursues the even tenor of its way, gloriously careless of the mere existence of such extraneous trifles. Even the few who deign to give wildfowling a second thought, contemptuously dismiss it as an occupation only fit for sea-fishermen, polar bears, and similar pachyderms.

It is a singular anomaly. On the one hand the familiar birds of the country-side are subjects of intensive study, provocative of a ceaseless flow of literature, technical or fugitive; and inland Britain is virtually one great game-preserve where sporting-rights command high rentals. . . . Yet, in exact reverse, this pursuit of wildfowl on the open coasts—though free to all—without cost—is almost totally ignored; left to the sole enjoyment of a few fishermen-fowlers who supplement the scanty earnings yielded by the harvest of the seas by intermittent attacks upon the hordes of wildfowl which each winter seek the refuge of our shores. Yet this sea-game, in actual numbers, far exceeds, area for area, that of all our inland

game even under the most favourable conditions and artificial propagation. Nevertheless, with the exception of, say half a dozen amateur enthusiasts in each sea-board county, hardly a soul gives our coast-wildfowl a second thought. Few ever trouble to go and see them—wondrous as are the spectacles they present. The vast majority are totally unaware of their bare existence outside of books or museums. The apparent anomaly is accentuated by the fact that this pursuit brings into play a combination of yachting and boat-sailing, together with gunning



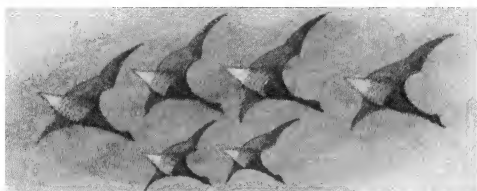
—a triplix of popular sports that, one might conclude, would ensure its attractiveness, despite all uncertainties and “hardships.” That aspect, however, has never appealed—Strange that the freedom of ocean wave, the thrills of “a wet sheet and

a flowing sea and the wind that follows fast” should awaken no response in British breast—at least aboard a gunning-punt—Strange that such joys should stir no Viking blood!

No suggestion must be inferred that an experimental expedition is herein recommended, or that such enterprise would be worth anyone’s while to undertake. For nothing in the cynegetic world is clearer than the fact that wildfowlers (like great poets) are born, not made. They form a class apart. Those in whose breast the flame burns innate, already know as much as I can tell: the rest would merely incur “discomforts” (?) and disappointments, and probably vent a savage ire on those who had been foolhardy enough to advise such ill-starred venture. No, let those good folk stick to their stubbles and turnips; or, if so fortunate, to the heather.

Writing in the *Field* more than thirty years ago, the Author was rash enough to extend such an invitation—partly in the following terms:—“The flood-tide is running strong, with a fine off-shore breeze: as the smart gunboat cuts through the seas and spray curls crisply over her bows, the spirit of the

young fowler will be stirred to its core as he sees on every side, on wing or wave, new bird-forms that he had never seen before nor his philosophy ever dreamt of. The variety of types entrance the sense of sight. Some are weird, like the grebes and loons; others stately, such as mallards and sky-cleaving skeins of geese; many trim and smart; but all full of vivid life and character, beautiful, and specialised each to its assigned method of living and its own struggle for existence. What are they? Our young friend will come to know them all in time—to know them intimately; say, in a year or two (but better, in ten!) But let him remember that none can be truly introduced to sea-game on paper, nor learn Nature's lessons



from printed page." The invitation met with no response and is not repeated.

To what primary cause this psychological gulf be attributable is an enigma. Game being abundant and universally distributed, present no difficulty in finding or killing—the question is merely of the relative quantity that may be killed. Wildfowl, in direct reverse, are not found everywhere—not even in every county; but rather concentrated in special resorts congenial to their reclusive nature, proportionately less so to our own, and usually far from the haunts of men, and then chiefly in winter. At such time and place, though one may see ten-fold more in a day than is conceivable with game, yet there may occur no opportunity of securing them. With world-wanderers—cosmopolites of space such as these—a skilled fowler may spend days, even weeks of laborious toil, daily within sight of wildfowl in thousands, yet unable to obtain a single unit. Within that little fact are

perhaps comprehended both the drawbacks and the glories of wildfowling afloat ! But surely such are worthy foes ?

“ Tribes of the air, whose favoured race
E'er wander through the Realms of Space—
Free guests of earth and sea.”

Not only do wildfowl far exceed game-birds in mere numerical bulk, but equally so in their variety of tribes, genera, and species do they outstrip their dry-land cousins. England, after all, claims but four kinds of game-birds, and those four of more or less equal habit and restricted range : whereas on salt water the web-footed hosts count up into scores of different species and there are, in addition, whole tribes of the “ hen-footed ” orders—the waders, most graceful of all. The habits of sea-game, moreover, vary in equal ratio with their variety of classes and orders. Some come only in mid-winter ; others in spring, or in autumn ; while at both the latter seasons there pass along our coasts migrating hordes in through-transit to the uttermost parts of the earth. Again, while here, some feed by day, others exclusively by night, or perhaps according to the tides—regardless of the periods of light and darkness. Thus the moving panorama of bird-life presented—especially at dawn and dusk, but also throughout both day and night—might, one would anticipate, have proved a loadstone irresistible to the feeblest naturalist : but no such magnetism has evolved. It may be bold to say so ; but, in my considered view, much of the life-histories of this great section of British birds—their ranges of space and of habit, their plumage-phases and varied processes of development (often extended over years)—remain to-day less understood or, more accurately, misunderstood and misdescribed, than is the precise classification and identity of many foreign birds that inhabit the ends of the earth. Our ornithologists of the Cabinet have ever devoted vast energies and ability to such investigation of far-away creatures, to the virtual neglect of well-nigh one-third of our British avifauna. They prefer the sorting-out of dry skins from afar, and the conferring of irrevocable Latin names (in triplicate) upon

denizens, say of Pacific islands or of far Cathay—creatures that they have never themselves seen in life.¹

“These things ye should have done,
And not to leave the other undone.”

Well! we remain as far as ever from resolving our enigma, the psychological enigma *why* wildfowl and wildfowling should evoke such abounding enthusiasm in a handful, while ignored and despised by all the rest. Undoubtedly the hard service of wildfowling afloat by day and by night in mid-winter—especially in those severe seasons which always yield the best results—demands qualities of endurance and dogged perseverance, together with the love of adventure and of a certain degree of danger, which hardly enter the domain of ordinary field-sports. A potential drawback is the solitude of this service, which conflicts with the cult of gregariousness; while the constitution of a prize-fighter, or a polar bear is oft presumed to be a primary essential. With reasonable precaution, the latter is not necessarily the case; though the dictum of the veteran fowler, Buckle, comes near the truth, “It’s aye the toughest dog as gets the most.” No craven suggestion of degeneracy merits a moment’s thought, for the anomaly flourished a century or two ago exactly as it does to-day. Thereat we leave the enigma—insoluble.

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Even in poetry wildfowl find no place. Wordsworth, it is true, once sang of the aerial evolutions of “waterfowl” (by the context, the poet clearly meant *wild-duck*), and Burns briefly lamented their innate abhorrence of the human race: but with those exceptions there occur—so far as my reading goes—no specific references in all the inspired writings of our poets.

The oversight is the more conspicuous by comparison with the graceful eulogies sung of all our fireside favourites—song-thrush and “ouzel,” robin, nightingale, skylark, swallow, and

¹ Conceivably, as knowledge progresses, this system of “dermatology” may prove the better way. Such eventuality, nevertheless, appears in my eyes so unthinkable that I burn my boats and remain content in this and several cognate matters to await the verdict of another generation.

the rest—each of which might boast a volume all to itself. The poets might, of course, crush such criticism with the apt rejoinder:—

“A taste exact in faultless fact, amounts to a disease.”

Three illustrations of the divergent points-of-view from which wildfowl and wildfowling are regarded by different mentalities may be added. The first is a recollection dating back to boyhood's days. At that time one of the most adventurous and



far-travelled hunters, a man who revelled in risks with dangerous game, Capt. H. A. Levison, who wrote under the pen-name of “The Old Shekarry,” essayed to try his fortune with wigcon by night. His emphatic verdict ran roughly as follows (I have

been unable to turn up the exact reference):—“Not for all the wildfowl on earth would I undergo such an ordeal again—not even if the gunning-punt was fitted throughout with watertight compartments after the manner of a lifeboat, and furnished moreover with store of rugs and hot-water bottles—also with life-belts, buoys and rafts, and even a keg of old cognac.”

Another letter reads:—“No, thanks; I won't venture again. There is something fascinating about that punt-gunning on the coast—it is so gloriously wild and rude. I'm glad I've seen it *once*, but once is enough. To tell you the truth, I did not get over the effects of that trip for three or four weeks and decided that the business was too rough for me. I cannot stand the exposure and my constitution won't run to spending half the night in a wet canoe and coming in to breakfast on a starfish at 6 A.M. No, I won't come again.”

A third letter strikes the converse note. Read its enthusiasm:—“I have now done four seasons' fowling, so begin to understand it *a little*; but learn some new lesson every time

I go afloat. What a glorious game it is! I no longer care if I never shoot a grouse or a partridge again, and sometimes think I will sell my horses and give up hunting too."

Wildfowl in Legal Aspect.

No aspect more specchfully betrays the general apathy and confusion of thought in all that concerns wildfowl, than the futile succession of legislative enactments that during the past fifty years have adorned (?) the Statute-Book. Having myself throughout the whole period preached a truer Gospel, I have no thought of further efforts to put the world right.¹ That consummation will never arise *until* . . . until some CABINET MINISTER shall himself take up the pursuit of wildfowling. Admittedly the contingency is hardly probable, since *CABINET MINISTERS* (capitals please) are not built of that stuff. I write trembling; but not only with supreme respect, but even with a latent suspicion that there may exist an exception—possibly two. By "not built so," I mean in the sense that the brawn and muscle of a coast-fowler would not *per se* be deemed a full qualification to devise and direct delicate details of diplomacy. Still! should the suggested contingency materialise, that *CABINET MINISTER*, as the fresh light burst upon him, would be the first to exclaim:—"Well! that old Voice in the Wilderness was right all the time, if only we'd had the wit to understand."

But though none of our great law-givers may be in the least likely to adventure their lives (and reputations!) aboard a

¹ Were a serio-comic exception permissible, it would be on the lines that Parliament should devolve its functions *ad hoc* and appoint the Author its sole Plenipotentiary to draw up an Act which would settle this matter once for all. Necessarily the Plenipotentiary must be left independent of all the present Parliamentary advisers—Doctrinaire ornithologists, Dicky-bird Societies of the sillier sect, and the rank and file of cranks, faddists, and sentimentalists at large. Already these estimable folk have had a 40-years' innings: but (having no practical grasp of the subject or the vaguest notion of what that term "wildfowl" imports to those who know) the only outward and visible sign of their prolonged activities consists of some dozen Acts of Parliament (with hundreds of "Orders in Council") lying stranded wrecks along the shore.

gunning-punt, at least we have legislators of the first rank who are skilled exponents of a sister-craft almost as strenuous, that of salmon-fishing.

Now, most seriously do I address this question point-blank to these great men. What would be their view—what would be Viscount Grey of Fallodon's view—if it were legally enacted that their spring salmon-fishing in February, March and April—(the cream of the season, by the *Fallodon Papers*)—should be prohibited *because the trout are not ready till May*?

Yet that is precisely the injustice that Parliament has decreed to the wildfowler. March is sometimes his best month—not seldom his only one—to reap a scanty and precarious harvest from the hordes of foreign wildfowl that, in severe winters, seek the refuge of our shores. But that scanty harvest is denied him. Why? Apparently lest he shoot by mistake some . . . hoopoe, or golden oriole, or other cockiology specimen (none of which, by the way, are here at all in March).

Now will our good salmon-fishing Legislators kindly answer the above question? I rather challenge a reply—(that challenge isn't so bold as it looks, since no response is possible; none but the Silence that speaks).

Recently I read in the *Times* an account of a duck-shooting held in India last *April* (1927) by the Viceroy with some of the great Indian Rajahs—1069 duck being killed on the first, 539 on the second day. No blame is imputed—quite the reverse; the shooting was absolutely in order: for better sportsmen do not exist than the Indian Rulers, nor any less capable of taking an unfair advantage of their game. Yet, at home, such a performance would have subjected the sportsmen concerned to incalculable fines—if not to imprisonment! How do our hysterical "Protectionists" explain that what is perfectly right for a Viceroy and Maharajahs in India should be a crime in a British wildfowler? Will anyone answer that? Again I challenge a reply; yet—

"Answer comes there none;
And this is scarcely strange, because
They're speechless, every one."—*Alice* (adapted).

While our four British game-birds have their own specific and sensible game-laws, each with its appropriate close-time; yet the whole great Order of Wildfowl (which are equally as important to the fowler as game is to the inland gunner) are, if not totally ignored by the Legislature, at least contemptuously dismissed in *six words*, thus:—

“ Ducks (all species).

Geese (all species).”

All these hosts of winter wildfowl are promiscuously lumped in together, alongside tomtits, skylarks, swallows, summer-warblers and other heterogeneous creatures, with which they have no conceivable connection or affinity. It is a sorry story—long-drawn bumbles in high places that might provoke mirth but for their melancholy. Knowledge and wisdom are not synonyms.

Now, let us quit preaching and turn to the practical aspect—in short, let's get afloat on salt water!

II.—THREE MEMORIES OF WILDFOWLING AFLOAT.

(1)—Its Trials, its Triumphs, and its Tears.

'Twas midnight when we awoke—one of those stilly, bracing nights that mid-winter oft vouchsafes, when the very winds are vanquished by the severity of the frost. The thermometer stood at 16° Fahrenheit and the whole landscape lay enveloped in snow down to full-sea mark. An hour later we were afloat on a silvery sea so calm as to seem asleep under the stars and a third-quarter moon riding high in the zenith. Our spirits also soared aloft, for (though we knew it not yet) this was to prove a red-letter night in our annals. At three-quarter's flood (3.30 A.M.), in the half-light of a “false dawn”—aided by a flicker of *Aurora borealis*—we brought off quite a good shot at wigeon. Their company had appeared no more than fifty strong, but nicely grouped—all busy feeding under the moon-rays: so that a baker's dozen was empuncted in that nocturnal obscurity. Two hours later, ere yet it was fully light, a fairly

smart right-and-left had added a couple of mallard-drakes—in our hearts the “Pride of Dominion” soared to full-flood level! But all that is quite off the point of this yarn

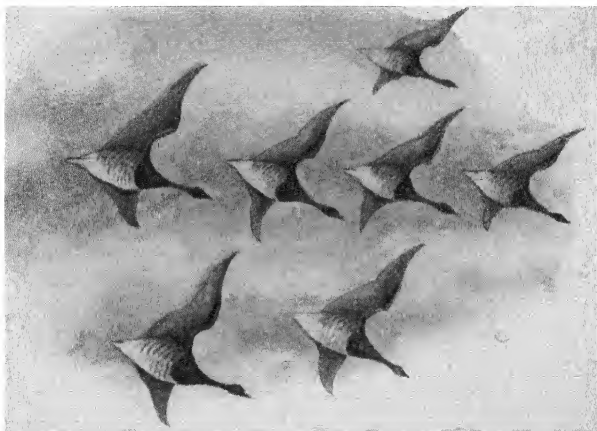
Shortly after daybreak, geese in thousands had appeared, pack succeeding pack, coming in from sea. But during all the morning hours these wildest of all wildfowl persistently derided our efforts to secure an interview with their clamorous hosts. Never, in fact, had we approached within a quarter-mile. Only once had local environment—(which, being interpreted, signifies a twelve-inch slope of some intervening mud-bank)—appeared even slightly to favour our endeavours: and that half-chance was dissipated by an untimely shot fired by some shore-gunner a couple of miles away. That “Pride of Dominion” began to ebb. As Burns sings of wildfowl:—

“Man with all his pow’rs you scorn ;
Swiftly seek on clanging wings
Other lakes and other springs,
And the foe you cannot brave
Scorn at least to be his slave.”

Towards noon the tide was running out strongly, leaving bare vast verdant stretches of zostera-clad ooze. Such, however, was the tense severity of frost that the last thin film of receding salt-water had frozen hard ere yet the mud was entirely exposed. As a result, this film of ice denied both to the geese and all other wildfowl alike, their expected breakfast on the zostera marina: hence their hungry skeins were kept constantly a-wing, fighting hither and thither in search of fresh feeding-grounds as the falling tide laid further stretches dry. Wherever one’s eye might rest, sea and sky were streaked and seamed with shifting files; while the still air resounded with a wild-clanging chorus—sights and sounds in themselves a sufficing reward.

The strategy of the wildfowler, afloat and ashore, is ever directed by *opportunity*—that is, he must be alert to seize the slightest advantage that may be offered by any temporary difficulties of his quarry—seldom, indeed, do any *grave* difficulties befall these astute cosmopolitans! That morning we

were quick to perceive one chance thus offering—small enough, yet tangible. So far as it was safe, we navigated the gunboat up one of the tidal creeks that intersect those leagues of rotten ooze: but at frequent intervals as the tide fell, dropping back stern-first so as to keep our craft afloat with an inch or two of salt water beneath her keel. It meant of necessity, a long and weary wait; and that on the merest off-chance that—in so vast a space—one or other of those picturesque packs of geese should pass within gunshot of our concealed and camouflaged ambuscade. Sometimes a passing pack *did* arouse transient hopes;



but these geese—such was their luck—each time crossed our bows beyond all reasonable range. There was abundant reward, nevertheless, to an eye appreciative of Nature's wilder scenes, in thus watching, unseen, the wonderful panorama that kept unfolding over those wide wastes of tidal wilderness.

One may wonder what proportion of the forty-odd millions who (we are told) inhabit these Islands, have ever personally witnessed these matutinal scenes? Possibly the answer would involve a calculation in decimal points—with several antecedent cyphers preposed. One may wonder if two folk in every ten thousand have even seen a brent goose on the wing? or would recognise it if they did? The minute minority, moreover, who

do see, are mostly actuated rather by material results—say a dozen geese at a shot (price, five shillings a couple)—than by any abstract love of the observation of wild-life. Poor dear Pachyderms! All the outward and visible joys—the successes and the failures—you share equally; but this inward grace is denied you—like the Peri at the Gate, you stand (but not disconsolate!).¹

All around our post in that creek was displayed a constant sequence of these inspiring pictures. At closest range, there tripped by active companies of the wading-tribes—among the

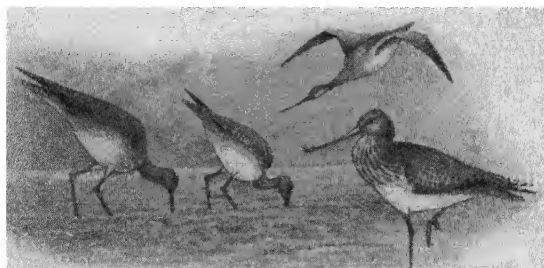


most graceful of the whole feathered race. The frost-bound flats being sealed against their utmost efforts, these beauties — my beloved "Globe-Spanners" of the *Borders and Beyond* —were to-day restricted in their search for breakfast to that narrow margin

of unfrozen ooze that lay awash—the margin whence the tide had only momentarily receded—and beyond that, so far as wading permitted, to the shallows outside. The first of these groups "censused" consisted exclusively of dunlins, all nimble as frightened mice, but in a variety of costumes. The crowd which followed, though otherwise identical, enjoyed the company of two grey plovers—a species which, though

¹ A word or two respecting the Brent Geese may be appropriate. These wildfowl are only "*British*" in the limited sense that they seek the refuge of our shores in severe winters and then by tens of thousands—usually *after* the New Year. But, even so, they *never touch British soil*, being exclusively marine in their haunts. By night, they sleep at sea, and only enter tidal mud-flats to feed. Brents never go inland, nor trespass a single yard above the full sea-mark. Hence, as above remarked, few see them, and their case is a matter that concerns wildfowlers alone and no one else. Further, Brent Geese do not breed within three or four thousand miles of our shores: and their breeding-season falls three or four months *later* than the dates which prevail in our Islands—that is, *after* midsummer.

habitually sociable, is never gregarious, seldom seen more than a dozen at most together. The plovers were, of course, conspicuous by reason of their being about four times bigger than their temporary pals—Tritons among minnows. Third in this passing show, came a score or two of knots (*Tringa canutus*), rotund fluffy balls of grey, nearly as plump as golden plovers and reputed even better eating. The knot has a distinctive personality in his clan—less agile than the nimble dunlins, ring-dotterels, stints, sanderlings and others of that ilk (by reason of shorter limbs)—and also disagreeing in that knots are intolerant of alien intrusion in their ranks—they “keep themselves to themselves.” Yet, while not sociable, knots are



GODWITS.

essentially gregarious, as may be gathered from the recorded fact that as many as 160 have been killed at one shot. The present little company had breakfasted early, for they settled down in siesta right in front of our gun-muzzle—so near that the difference between adults and crescent-spangled yearlings was clearly distinguishable. Redshanks come in a somewhat similar category, shunning as a rule the society of other species; though never themselves congregating in the vast assemblages customary with knots. This morning the few that fed past us were in threes and fours.

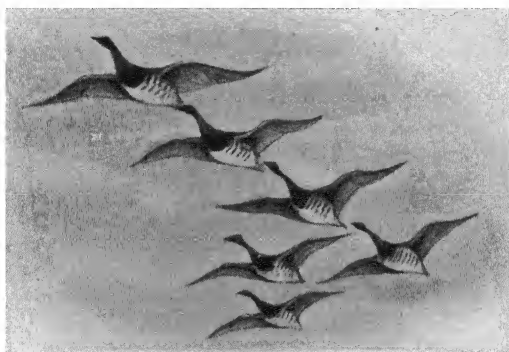
A handsome wader that was in constant evidence both to eye and ear (but never within shot!) was the godwit (*Limosa lapponica*). These in great clamorous packs, hundreds strong, kept flying hither and thither in search of ice-free feeding-

grounds, "barking" and whistling, but never happening to alight near-by. Possibly the half-seen apparition—the long low grey gunboat, was sufficient to arouse their alert suspicions; for godwits in midwinter count amongst the wariest of sea-game—hardly easier of access than the geese themselves. Only *twice* during fifty-odd years of coast-fowling have I got "upon terms" with their big battalions, and on each occasion on just such bitter mornings as this—when the flats were frost-bound and the hungry godwits constrained to feel along the very verge of the ebbing tide. Only within that narrow limit were their deep-probing operations possible; hence twice in the half-light of dawn has human "Dominion" prevailed, the two shots realising 40 head (23 and 17), as already related in my *Art of Wildfowling*, p. 220.

Throughout these hours we had, it will be understood, been lying prostrate on our chests—flat as any flounder—hardly daring to raise an eye much above the coamings: and the total height of that superstructure was precisely $13\frac{3}{4}$ inches. The attitude is not convenient to the human frame. Elbows and knees should be constructed—not of poor flesh and bone, but of reinforced concrete: while the neck-muscles should be of whipcord—if not of steel wire: but terrestrial joys can rarely be realised without corresponding pains. Lying supine thus, we had munched our sandwiches and tried to drink bottled beer from the neck. Now the accepted principles of hydrostatics hold that fluids will not flow upwards—they "seek their own level." Herein Nature's law was shattered—by suction! since necessity knows no law!

Then at length the moment arrived . . . the crucial moment long awaited, yet scarce definitely expected. Virtue and patience were to reap their reward. While yet suffering that un-gargantuan feast . . . it came. Broad away on our right, 500 yards distant, a great gagging phalanx of geese were directing their course straight upon our position—so straight that it seemed doubtful whether the big gun could ever be brought to bear. Already we were manœuvring to bring the gunboat's bows round to starboard—hoping thus to take the

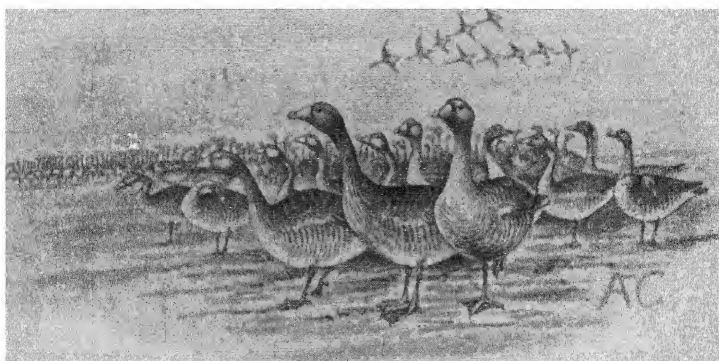
shot "coming in," straight ahead—as at driven grouse: when the geese, each unit soliloquising gently in conversational tones, swerved six points inwards. Three seconds later the fast-flying phalanx was crossing our bows right ahead—range 80 yards, elevation 15. By "tipping" the stancheon-gun till her butt touched the bottom-boards (as the result showed), an absolutely mathematical trajectory must have been attained: since, during brief seconds, the shot appeared to have cut a clean gap through the centre of their column. Eight geese fell directly on our front; while two more, heavily hit, sloped away



to fall dead some 500 yards to leeward—an excellent result from a gun carrying no more than 10 oz. of shot.

That day we had the assistance of a following-boat, which for the last hour or so had been "standing by" in the open water half-a-mile astern, and which at once made sail to retrieve the two distant geese. By the time we had collected our own eight, we saw that our "Fleet-auxiliary" had arrived as near the two "droppers" as the tide would permit. Then brother Walter stepped overboard and set out on a laborious trek across the mud. It was according to the tradition of our craft—for we kill nothing uselessly. Still, there was an obvious element of risk in crossing rotten oozes always deep and in places dangerous. Each step was at least ankle-deep — some half

knee-deep, threatening to drag the sea-boots off his feet: hence progress was slow and halting. Probably half an hour had elapsed ere W. reached the hard-earned prizes; and by that time the falling tide had forced both the attendant boats to drop back, yard by yard, so as to keep afloat. We were now a full half-mile apart and, with the interval increasing every minute, it became clearly impossible to pick up our plucky "retriever." W. also promptly realised the situation—that



GREY GEESE IN THE SPANISH MARISMA.

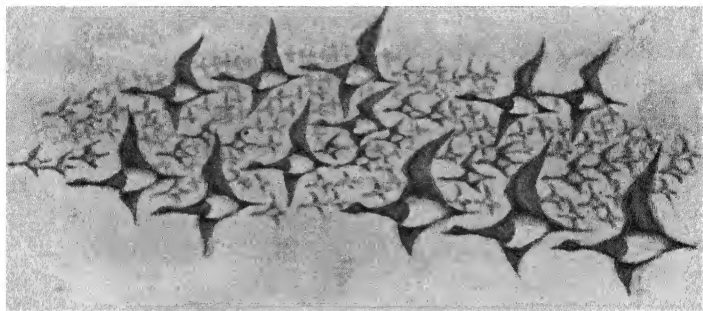
he was marooned—and resolutely set off for the main shore, distant some two miles, and soft mud all the way. What he suffered on that enforced tramp cannot be told. Even on reaching terra firma, there still remained some five or six miles to walk—encumbered with sea-boots, gun, and geese—ere a dogcart could be obtained. Hence it was long hours after dark ere he regained headquarters—he had recovered the geese, but at a price which was excessive.

The day's bag thus totalled 25 head—ten geese, fifteen ducks; but it had cost eighteen hours of the toughest work to secure, besides a lesson we have never forgotten.

(2)—**The Tragedy of the *Sea-Star*.**

During one of the severe winters of the late 'seventies, a small cutter-yacht of four tons register arrived in the harbour where we had then established our headquarters, and her owner suggested that we might combine to use the yacht as an advanced floating "base of operations" off-shore, keeping both gunboats in tow.

The proposal hardly appealed to my judgment as a really workmanlike proposition, because the *Sea-Star* was in no sense adapted for the serious service of wildfowling in shallow



A FLIGHT OF WIGEON.

tidal estuaries. She drew too much water, having not only a deep keel, but an extra leaden kelson fitted beneath it; and was altogether more suitable for summer-cruising than for the specialised winter-work in view. Still, the idea had a flavour of adventure about it and we decided to put it to the test. For a few days there did accrue some advantage in possessing an off-shore base, well out, whence the real enterprise could be initiated—that is, we sometimes commanded a position in rough water which would have been inaccessible in a less seaworthy craft such as a gunning-punt, with her puny 6-inch freeboard.

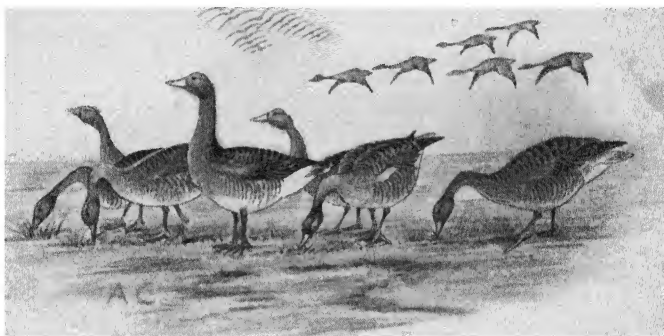
The following days bequeathed quite a number of happy memories: for we enjoyed quite reasonable success in wild-gunning, the weather at the time being of the bitterest, the whole haven a sheet of ice, with piled-up floes as far as eye

could reach, and wildfowl in that abundance which I have so often endeavoured to describe—ocular proofs which, nevertheless, appear to be incredible to those good folk who *never go to see* for themselves.¹ One particular dawn yielded the heaviest shot at wigcon that had then fallen to my lot. That aspect, however, need not here concern us. It is not the progress of the venture, but its somewhat catastrophic conclusion that I propose to relate. That final night, when we set forth in the small hours, though bitterly cold (about 12° frost), was a flat calm, starlight, with a nearly full moon on the western horizon: but ere we regained the yacht, about ten o'clock, a fresh breeze had sprung up from the north-east, rapidly increasing in force and bringing with it a succession of blinding snow-squalls. In the tiny cock-pit of the yacht—some six feet square by four feet high, illumined by an oil-lantern slung from a hook above—we were making the best we could of a crepuscular breakfast, interrupted at intervals by the “Watch-on-deck” removing the hatch—(thereby flooding the cabin with swirling clouds of snow)—nominally to report, through the depths of a huge hairy beard, that—“The wind’s still in the north-east.”

¹ A Report on the *Present Status of Wildfowl in Europe*, recently issued by the British Museum, contains the staggering statement that so alarming is the decrease of wildfowl, that unless propped up on legal crutches, a risk of their total extinction is threatened. The Author, having studied and pursued wildfowl from one end of Europe to the other—and far beyond it—has no hesitation in affirming the precise reverse. Namely, that, in their own selected resorts, wildfowl abound to-day in the same immense aggregations as ever existed for half-a-century past. The Report cited is attested by names that command respect in each of their varied spheres: though not one of them (within my knowledge) has had any personal experience of the pursuit of wildfowling. The Report has one comic aspect, worth a brief reference. Of the eight learned societies upon whose authority it is based, one, we read, is entitled “The National Trust for Places of Historic Interest and Natural Beauty”—a most laudable object, but what conceivable connection has it with wildfowl? On the face of it, the opinion of the Ancient Order of Antediluvian Buffaloes would surely be equally valuable and appropriate? . . . With all due deference I would ask—and ask most seriously—do not such methods of inquiry approach the category of those “absurdities that borrow the similitude of sublimity”? For further remarks on the subject, cf. pp. 334-5.

Obviously there was an ulterior object in vouchsafing that intelligence at fairly frequent intervals. We knew it quite well, but for a while preferred to ignore the "oblique oration" and only insisted (pretty stiffly) on the hatch being shut down.

It should be explained that our crew on deck was singular—that is, it comprised but *one* hand who combined the offices of pilot and helmsman with those of the "Midshipmite and bo'sun tight, and the crew of the captain's gig." The multiple man was, however, an old favourite; so that, at about the fourth time of asking, we relented and, what time he took his



WILD GEESSE IN THE SPANISH MARISMA.

tot, the helm was neglected. Now it is notorious that hirsute navigators (during a snowstorm) are fairly speedy in performing the operation in question—it is merely a matter of moments. But at that point, the navigable channel was both narrow and tortuous, while the ebb-tide ran strong. At any rate, we felt a scrape, a sense of arrested progress . . . and the *Sea-Star* was aground. For such contingency we were totally unprepared, had no suitable appliances at hand, and such small efforts as we could make availed nothing. Then, as the tide rapidly ebbed, the cutter took a serious list to starboard and it became evident that, as the water left her—with her crank build—she would presently fall over on her beam-ends. That, within half an hour, was the sequel. Such makeshift "strutts" as we had at hand—oars, boathooks, a spare spar or two—snapped like

matchwood the moment the vessel's weight came upon them . . . then the starboard gunwale sank beneath the tide, salt water poured inboard, and in some three minutes the poor *Sea-Star* was a stranded and sunken wreck. Quickly the keel slipped down the sloping bank into the deeper channel and not a sign of the ship showed above-water. Meanwhile, of course, we had transferred ourselves, with guns, gear, and all that was portable, aboard the gunboats alongside; and thus eventually reached the shore; though still several miles from the haven where we would be. So ended my first and last yachting cruise.

(3)—**The Caprice of Fortune in Fowling.**

The hour was 4.50 A.M. of a December morning. From straight ahead and beneath a waning moon, there resounded that inspiring concert, the sibilant chorus of massed wigeon when, in fowlers' phrase, these ducks are "all of a charm." It is a concert that none hear save the midnight fowler. Alternately the volume of sound dies down almost to silence; then in swelling crescendo rises for half a minute to a fury of blended voices. This is the wigeons' expression of Grace after meat, since during several hours this night they have been enjoying an uninterrupted meal on their beloved *zostera* and (like higher types) are noisiest when full-fed.

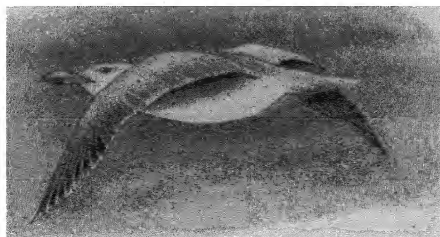
Meanwhile, foot by foot as the flood-tide flowed over the flats, our gunboat crept nearer, and all portents pointed to "Dominion" (for once in a hundred times) being entrusted to human power. Ah, for the vanity of hope! Though not yet within sight, we knew by sound—by the long-drawn musical *whee-yoo* of the drakes, blended with the purring growl of their mates—that we lay at the threshold of success. These are the critical moments in wildfowling, when the slightest mischance—say a single straggler or an intrusive curlew springing the alarm—may wrest from the fowler's grasp the reward of a hard night's labour.

Then, within brief seconds the whole outlook changed—the skies suddenly became overcast; great black clouds obscured the moon, darkness deepened across the spaces, and for ten

minutes a torrential rainfall splashed aboard us and raised phosphorescent flashes all over the dark ooze around. Being now certainly within shot, 'twould have been madness, in throttled moonlight, to risk going nearer and I had half decided to fire *by sound only*, when . . . Oh, thrice blessed Fate! from a rift in the pall ahead, there reappeared that chief helpmeet of the midnight fowler, the moon. *Then we saw.* Where the wigeon crowded thickest was quite three points away on the starboard bow, . . . quickly we corrected the error and brought the gun to bear. In the result, we gathered on the spot 19 wigeon and a mallard-drake—whereas, had we fired by sound, half-a-dozen would have been the utmost reward.

Ere the spoils were collected, a fresh breeze had sprung up, cutting off our retreat—at full sea and with miles of open water to cross, the homeward voyage in a gunning-punt was too dangerous. That enforced delay, nevertheless—horribly annoying as it was (four solid hours of shivering and suffering)—produced an advantage. As day dawned we descried three more wigeon, making our night's total 23 head: and hardly had these been safely empunted, than there loomed in view a long-shore gunner, prowling along with his dog—lucky that that trio fell to their legitimate owners?

It was nearly noon ere we got home to breakfast, little better than human icicles. That condition, however, is more or less a normal incident in this precarious pursuit; and only serves to recall less favoured occasions, when equally strenuous labours have gone all unrewarded by a single feather. This luckier morning we had, at any rate, over a score of tangible units; besides—far more valuable—these intangible memories.



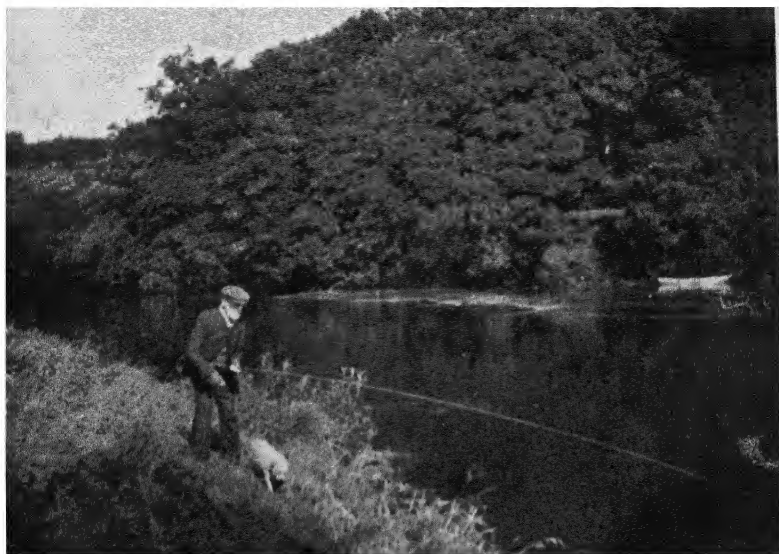
CHAPTER IV

THE TROUT ON THE BORDERS—(SALMO FARIO)

REMINISCENCES OF SIXTY YEARS' ANGLING.

SO voluminous has grown the literature in honour of our friend the Yellow Trout that one may properly hesitate before adding thereto. Such reluctance may explain the fact that, hitherto, the Trout (though often lovingly mentioned) has never yet had a chapter of mine devoted exclusively to himself. But for that sentiment, I should have loved to let my pen run riot!

It is, nevertheless, the charm of the vernal environment of trout-fishing almost as much as the personality of the trout himself that has inspired countless idylls, both in poetry and prose, throughout the angling age. Sometimes these concomitant amenities of trouting seem to be granted higher rank than the craft itself . . . or even the trout! That, however much the graces of literature may excuse it, cannot be justified in fact. By all means revel to the full in these subsidiary joys—in the “primrose by the river’s brim,” in the brimming river itself, running moss-brown and foam-flecked, redolent of spring-scents and resonant with the trill of new-come curlew, with glad music of bird-song and of dancing stream . . . in the wealth of wood and water, with their new-born plant-life. Drink all this in—revel in it: but, after all, the trout must take first place. He demands nothing less. . . . For his undoing, nothing short of sheer concentration, of mental absorption, will suffice. The naturalist who, in esoteric ecstacy, overlooks that Primary Rule, is bound to fail as an angler. None can truly do two things at once. But there is time for



SALMON-FISHING, BLINDBURN POOL, HOUXTY, SEPTEMBER 1924.



DRY-FLY FISHING, THE CROY'S STREAM, HOUXTY, MAY 11, 1927.
(*Riddell: Photo.*)

[To face p. 56.]

both; and should the *first* be the chief object, better leave the rod on its rack that day.

These collateral aspects of trout-fishing need no repetition here—already they have occupied legions of abler pens. The trout himself shall be our subject; and perhaps there remains one pronounced character of his that has failed to secure its due meed of adulation—that is, the charm of his individual variation. No two trout are ever precisely alike. In each, one discovers a fresh ideal—a new gem in Nature's infinite artistry, revelling in a riot of colours that embraces the whole scale of chromatics. No other British species rivals the trout in this—unless it be his neighbour, the Red Grouse (and then in wholly different degree). You may have killed thousands; yet the pleasure of examining and admiring the infinite range of their colour-scheme never palls. Spare a few of those crowded April minutes—albeit the Ephemeridæ are hatching-out in millions—a dozen speckled beauties laid out on the grass will reveal every time a fresh lesson in Nature's inexhaustible wealth, alike in colour, in design, and in contrasts. To-day, for instance (29th April), the gill-covers of one victim displayed a glory of celestial blue—a fragment, as it were, of the summer Heaven! But that blue was heavily starred with bold black spots—the effect emphasised by deep sage-green above, by graded gold below, and by the rutilant prismatic verdure of the flanks. Alongside lay another; but here the cærulean hues were replaced by palest sea-green, quite spotless, save for two tiny stars; while the body-colour was “expressed” (to borrow the “fashion”-phrase) in glancing shades of steel-blue, varying from opalescent to “lapis-lazuli.” Even the fins (pectoral and ventral) differ as between dark brown, sage-green, and brightest golden-orange; while the irides vary from dark, through hazel to palest gold. Of seven trophies laid out on another noon, six ran pretty well through the whole gamut of body-coloration; but the seventh marked quite a new note, his flanks being suffused with a rich and rare orange-bay, or amber—though all were taken from the same stream.

But after all, the apparent colours of trout, their Tyrian

dyes of purple and gold, partake rather of the hues of a rainbow—reflexes or refractions, dependent as much on the play of light as on any tangible tones from an artist's palate—

“As though the rainbow were in-tail,
Settled on him and his heirs male.”

A very generally accepted thesis runs that, after spawning (which occurs in October), the trout remains in a more or less emaciated condition, kelt-like, throughout the winter, not fully recovering till the spring—nearly half the twelve-month. Then, after six months of semi-torpidity, the sudden transition of the aquatic ephemeridæ from their nymphal to the flying stage, by enabling the trout to gorge on *winged* insect-food, suddenly restores his pristine strength and energy. The story reads prettily and coincides with the poesy of angling: but is it true? While far from disputing its general bearing, it is yet open to suggest a doubt of its operation in particular.

It is common knowledge that the trout has a healthy appetite—not to call it voracious: moreover (differing thereby from his sea-going congeners, the salmon and bull-trout), the river-trout continues to satiate that appetite throughout the twelvemonth. With him, there occurs no break in the habit of continuous feeding; as is the case with the migratory *Salmonidæ* named, which latter have learnt to depend solely on marine sustenance—gorging in salt water, starving in fresh. The home-staying Yellow Trout has no necessity for such intermittent feeding, nor are his appetites subject to seasonal fluctuations. Year-in and year-out, he “takes his meals reg’lar,” and both digestion and the food-supply wait upon appetite. Hence the incidence of spawning—so grave, often fatal, to his sea-going congeners—by comparison, affects the river-trout but little. For him, lacking neither winter food, nor the ability to digest it, the strain of reproduction is quickly restored—as, in graded ratio, is also the case with his semi-migratory cousin, the sea-trout (*Salmo trutta*).

Thus the vernal hatch-out of the ephemeridæ affords no such specialised benefit to trout as anglers and poets are wont to

assume. True, the event constitutes a landmark in the cœnary life-history of the trout—much as new potatoes or green peas do in ours! That and nothing more: for it should be remembered that, long before they hatch, these very water-insects, in the form of nymphs and larvæ—creepers, caddis, and the like (not to mention river-shrimps, etc.)—are already sharing the river-bed with the trout and afford as abundant and as nutritious a food-supply as they do in their subsequent winged phases.

The belief that a trout is a sort of convalescent till he has recuperated his system by a gorge on insect-food in April, may be correct, but is not my experience locally. Our angling season opens in March, and it would be difficult to diagnose a physical inferiority (whether in flesh or in fighting qualities) between many a March trout and those captured a month or so later. In days long prior to legal seasons, *Colonel Hawker's Diary* frequently recorded catching trout in the Test at Longparish, as early as the New Year—even in December—and already in fair takeable condition. Here is a couple of such extracts:—

“1818, January 14th.—Began fly-fishing, and in about an hour caught as many trout as I could well carry, exceeding generally a pound each, and in such perfect season that most of them dressed as firm, and as red as a salmon, and had on them a fine curd the same as in July. . . . On the 27th, in half an hour, killed 10 very large and very well seasoned trout.” (Vol. i., p. 158 and p. 160.)

The two further extracts refer to December:—

“1842, December 29th.—So mild was the weather that I put my fly-rod together and soon caught 6 brace of trout . . . broiled for dinner, they were quite as good as in the early fishing-season.”

“1827, December 4th.—In little more than an hour, caught 6 brace of fair-conditioned trout.” (*Colonel Hawker's Diary*, Vol. i., p. 325; Vol. ii, p. 233.)

In no sense are the above remarks intended to deprecate existing close-seasons—quite the reverse: effectually as the trout “protects” himself, yet a full measure of legal protection and an ample reprieve are his due. Here the intention is

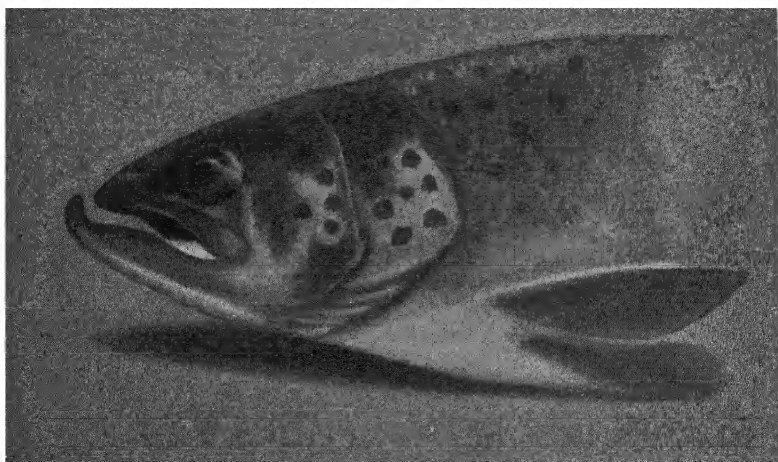
merely to demonstrate the physiological fact that, with the yellow trout, the "kelt-stage" is relatively a trifle when compared with the grave handicap which that condition imposes upon the migratory (and solely sea-feeding) *Salmonidæ*. Inscrutable to us, as are many of Nature's dispensations, the decree of hers that the migratory members of this race, after revelling in richest food at sea—should starve for long months on end in the rivers—is among the hardest of comprehension. For, incidentally, it involves the undertaking, while in reduced condition, of the strain and stress of reproduction without any corresponding means for restoring energy—an ordeal that, in practice, proves fatal to no small proportion of their love-lorn numbers. That ordeal our stay-at-home trout is almost entirely spared.

"April Dozens."

[Were not trinomialism an abomination to me, I might here be tempted to employ it for once, and so restrict the locale of our subject, as "*Salmo fario houxtiensis*."]

By comparison with the "April Dozens" so often recorded on the Borders in days of yore, the smaller numbers that nowadays serve to satisfy angling ambitions seem relatively paltry; and the causes of the decrease form an interesting subject for speculation. The first question to decide is:—were those multiple dozens of tradition ever *normal* captures in the Border streams? Secondly—were they *all* of "takeable" size? Or, alternatively, had a spirit of imagination (or exaggeration), with which the angler-genus has—whether rightly or wrongly—so often been credited (or discredited!) induced a previous generation to magnify their creels? Never would I dare to refute the suspicion in its entirety; yet my own angling diaries extending back some half-century or more, do at least tend to corroborate some of those ancient records. For many entries run from four to six or seven dozen of trout captured in a single day—often by one, usually by two rods. Unluckily we kept no record of the *weights* in those earlier days, and a suspicion suggests itself:—Were those all *takeable* fish? Well,

quite recently, by a lucky chance, I unearthed — amidst voluminous accumulation of odd notes and papers—a pencilled scrap that seems to answer the question. It described a day's fly-fishing on 20th April 1886, when the total for two rods was six dozen: but the mere accident that *one* of these was a



curiously malformed trout (as sketched), appears to have led me to weigh and measure the lot, with the following result:—

Seven to eight inches	.	.	26	} Two biggest . 13½ and 14½ inches. Malformed fish (<i>as sketched</i>) 12 ,,
Eight to ten	„	.	32	
Ten to twelve	„	.	11	
Above twelve	„	.	7	
Total <u>76</u> Trout, of 21¾ lb.				

The above basket (with many another) was made at Ramshope Lodge, at the head of Redewater, where that stream issues from Carter Fell, and forms, to the best of my recollection, a typical example of the numbers and average weights obtainable in these days. No angler, alas! can ever fish there again, since the lovely rushing streams and swirling

rock-pools of old are now submerged beneath the great Reservoir of Catcleugh, two miles long, and constructed to supply Newcastle (sixty miles away) with water. This impounding of head-waters is undoubtedly one contributory cause that has adversely affected the *Salmonidae* by destroying their upland spawning-grounds.¹

Furthermore, two minor records of ten and a dozen years earlier, quite incidentally, point to a similar conclusion. Twice at least, during the "seventies," a casual note occurs in the Diary to the effect that a 12-lb. creel would not nearly hold four dozen—"they filled a 'hare-pocket' as well." That suggests a reasonable average in size—say, three to the pound, which is roughly as much as may be expected locally. For most of the Border streams, with their rapid courses, rocky or stony beds and frequent floods, are comparatively ill-adapted for the production of trout-foods. One never sees, for example, those masses of waving water-weeds, ladies' tresses (*Conferva rivularis*), and the like, that in southern rivers form such prolific nurseries of insect-life.

Another yarn I am fain to add—at the risk of its being condemned as senile garrulity. Some forty years ago, on 20th May, in a bitter east wind, my brother-in-law and I had fished the lovely Lanton water on Glen from early morn till long past noon. Hardly had we seen a fin move and already my sister was seeking a sheltered spot for lunch, when . . . close on our front, a perfectly straight stretch some 40 yards long, suddenly became a-boil with rising trout. The stream ran in on a right-angle bend, very strong and turbulent at its head and the east wind blew straight up it . . . so that, for half an hour, I enjoyed not only the *easiest*, but the most

¹ The above water, it should be added, lay nearly twenty miles distant from the nearest railway station in England, twelve from the nearest in Scotland. It was, moreover, strictly preserved and seldom fished.

In that year my total score—including a trip to Denmark, Sweden, and South Norway (the Telemark)—amounted to 1000, of which 180 were "coarse fish," the remaining 820 of the *Salmonidae* (see *Wild Norway*, chapter xi.). The following season, fishing on the Borders alone, the total was 490.

deadly thirty-minutes of my angling career. The operation was simplicity itself—as easy as shelling peas! Three casts—right, left, centre—step up two yards and repeat . . . and a trout at almost every throw—sometimes two, once even three! In those days we seldom used a landing-net, so that each capture had to be stranded on the gravel. Ere that short pool was fished-out, forty-two trout were encreeled—weighed at Kirknewton station at 17½ lb. By then I had advanced to a 16-lb. creel; but even so, it needed to be supplemented by the “hare-pocket” once more! After lunch the rise shut down dead, though fly continued abundant. Never another fish did we get. . . . Caprice?¹

Note that in those days neither Glen nor Till had suffered invasion by grayling. Years later, on catching my first (in 1891) in the latter river, I was puzzled to know what it was.

Possibly the above may appear a digression; yet it tends off and on, towards the original point-of-view that, while trout have not seriously declined in *weight*, yet in numbers there is a lamentable decrease. The causes of that decrease are far too varied for consideration here. Briefly, may be recapitulated some of the more obvious sources of damage:—(1) The impounding of head-waters, already alluded to; (2) The universal surface-drainage of moorland; (3) The noxious chemical ingredients in sheep-dips; and (4) the tarring of riverside roads. Incidentally, the vast increase in the numbers of trout-fishers ought not to be passed over in silence. To-day there are scores where of yore hardly one would be seen in a month! Hence many waters are “ower sair fisht.” This leaves aside the greater question of pollution generally. Lesser interests must necessarily be subordinated to greater; but that does not imply that our fisheries should be needlessly sacrificed. Neither salmon nor trout cost the country a copper: on the other hand, they produce in solid food and contingent profits . . . Well! See the Blue-Books (or the White-Books) for

¹ Mr A. G. Bradley in his *Romance of Northumberland* and in *Clear Waters*, records almost identical details as regards average weights of trout captured during his long angling career.

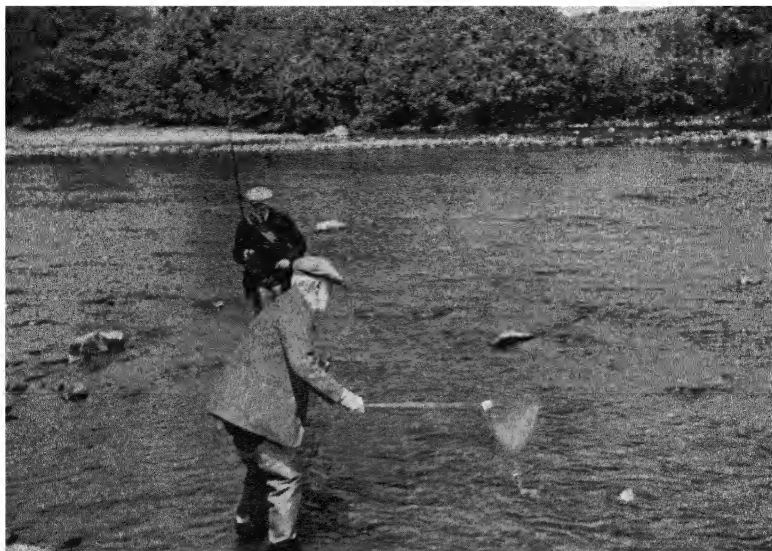
precise figures down to decimal points. In his *Life-History of the Salmon*, Mr J. A. Hutton, I notice, puts the annual take of salmon in these islands at 6000 tons; or, in hard cash, a million-and-a-half sterling. Add trout, and you may double that; while if the intrinsic value these fish afford us in sport be quotable in terms of specie, you can double that again. Now capitalise six millions at twenty years' purchase and you have a nice little asset of a hundred and twenty millions! Will any financier dispute that calculation?

In North Tyne, the best sport-giving trout are those of from half to a full pound in weight. Rarely is it that *on fly* (that is, *sunk fly*, my only standard), the angler will capture many that exceed the latter magnitude—rarer still after the month of April shall have sped. That month represents, locally, the cream of our angling season—virtually, the *only month* when big trout are wont to take fly freely during the hours of daylight . . . and for which “cream” I have oft, in bygone years, hastened home from the uttermost parts of the Earth.

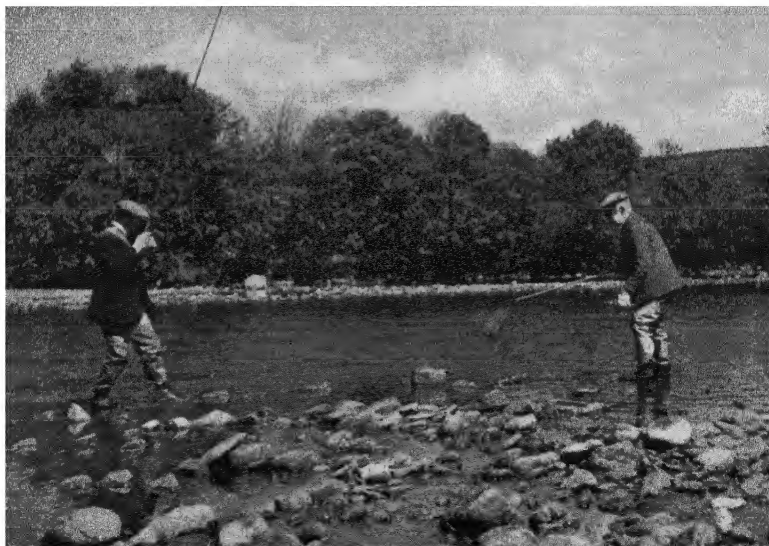
[It is not of course, *every* April—nor *all* April—that fulfils these joyous anticipations. Many conditions-precendent subsist, and these do not necessarily materialise.]

Once trout much exceed the size named (1 lb.) they abandon further interest in the Ephemeridæ and degenerate into cannibals, with unsightly heads, teeth like sharks and mouths like sepulchres.¹ These overgrown trout—(corresponding with *Salmo ferox* of the Scottish lochs)—are dour and sullen fighters, relying rather on sheer strength and weight, a dogged pully-haul, deep-under, and seldom showing till near ready for the net. Their minor brethren, on the contrary, are full of frantic dash and energy, lunging and leaping like acrobats, darting

¹ *Cannibals*.—All trout, of course, are cannibals, since all will devour smaller fry (of their own kind or otherwise) so soon as their jaws will open wide enough to engulf such prey. Many a half-pounder, although caught on fly, will be found to be gorged, right up to his back-teeth, with troutlets and minnows—to say nothing of worms, caddis, creepers, shrimps, and the other comestible debris of the river's bed.



(i.) Playing a Trout.



(ii.) Netted.

THE DRY-FLY ON NORTH TYNE, HOUXTY, MAY 1927.

(*Riddell: Photo.*)

[To face p. 64.

hither and thither till oft one scarce knows where they are—"Everywhere by turns and nowhere long." For a while a fighting half-pounder keeps one's heart in one's mouth.

In the South—so at least one gathers ~~from~~ reading—the angler's main skill lies in *hooking* the three- ~~or~~ four-pounders, say of Test or Itchen. Once that feat is accomplished, one hears less of the subsequent struggle. Hence I glean—perhaps quite wrongly—that, within limits, the fighting qualities of *Salmo fario* sometimes run in inverse ratio with his avoirdupois?

It was Andrew Lang, as I recollect, who (after testing them both) put the fighting qualities of a half-pounder on the Borders, as compared with the more plethoric monsters of the South, as that betwixt a London Alderman and a Scottish Clansman.

So totally unamenable in North Tyne are these larger trout to the seduction of insect-food, that an angler who relied solely on "fly" might well remain in ignorance of their very existence in his oft-fished waters. That existence, nevertheless, is not difficult to prove on lawful occasion. During summer-floods the spinning minnow (natural) sometimes forms an irresistible lure to unsuspected giants. It reveals the presence of trout that never succumb to fly, and of sizes not dreamt of in the philosophy of the fly-fisher. The more of these cannibals that can be taken out, the better for the welfare of the river. On a favourable day in May, one may land as many as a dozen, running from one to two pounds weight, and sometimes more. My own heaviest record remains at $2\frac{3}{4}$ lb., a fish of 21 inches, caught 23rd May 1906; one such "criminal," weighing $1\frac{1}{4}$ lb., and measuring $17\frac{1}{4}$ inches, had a second trout in his gullet over 8 inches in length, besides the half-digested remains of several more. Many similar records corroborate.

A couple of amusing incidents with cannibal-trout may close this chapter. In September 1924, I had just landed one big trout and within a few moments hooked another, rather bigger, on minnow. The second, however, when nearly played-out, broke away, taking a couple of feet of gut-cast. While we were expressing appropriate sentiments, there suddenly appeared, some 10 yards below, a trout splashing in violent

convulsions on the surface. The keeper was smartly at the spot and netted the fish we had just mourned as lost! The loose gut-line, having twisted around his shoulders, pectoral fins, and gills, had placed him *hors de combat*.

On 7th July 1924, having just landed a trout of 1 lb., and casting again from the same spot, was at once fast in another, obviously much bigger—this, in fact, we at first took to be a bull-trout. Being close to the tail of the pool and already in the “suck” of a long rapid below—heavily overhung with trees—it at once became apparent that this fish could only be saved by getting into the river and following down the rapid—200 yards, thigh-deep. We were neither of us equipped for wading; but the keeper took on the job and shepherded the captive (who behaved quite reasonably) down the long stretch of rough water. Here, at the foot, I awaited the attached pair; but, seeing that the fish was quite too big to land in the net, chucked the whole outfit—net, trout and all—into the willows behind. That, of course, broke the line, we lost some tackle, but we got the trout, 2 lb. 10 oz., 18½ inches long.

In spinning the minnow for trout, it is worth remembering that, as in fly-fishing, older and more experienced fish will often follow the lure with a certain degree of suspicion—particularly when “flood-full” and fastidious. They may pursue it half-across the stream, and even until, on shortened line, it spins close below the angler. In a *clear* water, they are then certain to detect the enemy and depart in haste; but in minnow-fishing the river is usually dark and moss-stained, and under such conditions the largest trout sometimes seize the bait *at the last moment*—almost as it is *in the act of leaving the water*. Hence this forewarning—lest the angler be taken unawares.

Thus on 28th May 1925, within a few seconds of each other, I hooked two of these larger trout exactly as described. The first, taking me by surprise, was never properly “struck” and presently got away free. Of the second, being then keenly on guard, a firm hold was secured. He scaled one ounce under 2 lb., and the lost fish was certainly no less.

CHAPTER V
TROUTING IN EARLY SPRING
ON THE BORDERS.

“A clime so rude whose Spring is but the child
Of churlish winter in her froward moods,
Discovering much the temper of her Sire.”

COWPER'S wise warning notwithstanding, the mere name of Spring still conveys—and will ever convey—a sense of delicious exhilaration, suggestive both by tradition and by poesy throughout the ages, of a rebirth of Nature, of her awakening after the winter's sleep . . . of zephyrs and balmy breezes, of bursting buds and catkins, of yellow primroses by the river's brim, of the hum of bees and bird-song, the trill of new-come curlew . . . and the rest. Oh, yes! it is the ideal which delights, and *that* should suffice. Not even a half-century of hard experience serves to banish those joys of anticipation, nor to teach us anglers a wisdom we have no wish to learn. We rejoice to share with the lower creation, despite all rules of logic, the ecstasy of the season.

Such are the notorious caprices and vagaries of our northern springtide and equally of our speckled friend the trout, that further illustration of their manifold perfidies may seem superfluous. Here, nevertheless, shall be recorded (though in briefest terms) an epitome of the contrasts and the lessons of more than fifty consecutive seasons.

For trout-fishing the legal season on North Tyne opens nominally on 21st March—virtually almost in mid-winter! On rare occasion, nevertheless, even the Equinox has introduced us to conditions well-nigh as balmy and spring-like as any we might enjoy during the two succeeding months. Such luck, however, is exceptional. Far more often have we set forth on

that happy morning merely *pro forma* and without really the ghost of a chance—whenever continuous frosts have annihilated the tributary burns and reduced the main river to zero . . . when the stiller pools are fringed half across with fast-ice and great green icicles hang like stalactites from each hollowed brae. Still, out we set, undismayed.

That first hour reveals a quartette of speechful seasonal signs. First, a gang of six geosanders—arrant poachers, yet I love them; then a couple of dippers—all these, busily diving in the deeps, bespeak continuing winter; next, however, a pair of redshanks (new-come that morn) equally suggest a potential spring arriving *someday*. Fourthly, the great “wave” raised by sundry kelts moving sullenly away as we pass—ominous, that.

At noon a transient hope revives as one precocious March-brown floats by; half-an-hour later a second insect fluttered across the stream. After that, never another ephemeron appeared, nor did a single trout move, speak, or even bark! . . . At last comes a savage pull—is it a Greenland shark? Polar bears to follow? No, it is only the customary kelt, but a big one: so, after the usual tussle, we turn it up and sneak home to lunch, “clean.”

Thus passes March, like the rest of the *Gloria mundi*. In simple truth, the angler’s joy in the mere exercise of his craft and sleuth must oft, in early spring, prove his sole reward. With petrifying east-winds that pierce the marrow, with blastaceous squalls of hail and blinding snow-flurries, it cannot be otherwise.¹ But to inflict tales of frequent failure were to

¹ Snowfalls are not necessarily fatal to fly-fishing. Many instances recur to memory when trout took quite freely after one had actually lost sight of line, cast, flies, and all else amidst falling flakes. Here is an example from Diary:—“April 19—Redewater; 23 trout, although it snowed at intervals all day. During one furious snow-flurry at noon, got four beauties when one could no longer see the water. It’s an odd sensation watching the cast vanishing from view amidst swirling strata of snow and then feeling the pluck of an unseen trout! At lunch-time the hills were pure white.” A similar day’s angling is described in my *Bird-Life*, 1st ed., pp. 27-28, and several others recur to memory. Snow in the upper air does not affect conditions under water.

abuse the reader's patience; so we skip a fortnight and recommence:—

"15th April.—No change: blighting east-winds, with snow-storms by day and hard night-frosts (up to 12°), and scarce a fly to be seen; score to date (after three weeks' fishing) still stands at thirteen—one half-pounder on 26th March, the other dozen on two days last week, when the sun, for half-an-hour at noon, shone out positively warm."

Any reader of sound sense—or, better, "horse-sense"—(which definition can only include those who have escaped the infection of this angling-fever)—may reasonably enquire, why waste energies thus on objects which are clearly unattainable? The stereotyped adage "Keep your fly on the water" is hardly convincing: but the infection aforesaid outweighs all logic. I recall, fifty or more years ago, on just such a bleak April day, while vainly flogging half-frozen waters that belonged to a friendly flockmaster, he propounded precisely the above query. "Never you fish," he advised, "except in weather that hatches snails and slugs." Yes! a splendid maxim for a flockmaster; but being then neither a flockmaster nor master of my own time, I feebly counter-queried—"But what do you do when it isn't hatching slugs?"—"Oh! just sit on the fence and watch the grass grow and the cattle turn fat."—Such rapture as Horace tells us he was content to enjoy on his Sabine farm! But Horace was not an angler. These, by the way, were the easy-going days when North British trains were wont to water anywhere between stations, the water being led off the moors above by wooden spouts—meanwhile the passengers scattered (in their season) to gather mushrooms!

Coleridge's axiom would hardly be accepted in full by northern anglers, that.—

"Work without hope draws nectar in a sieve,
And hope without an object cannot live."

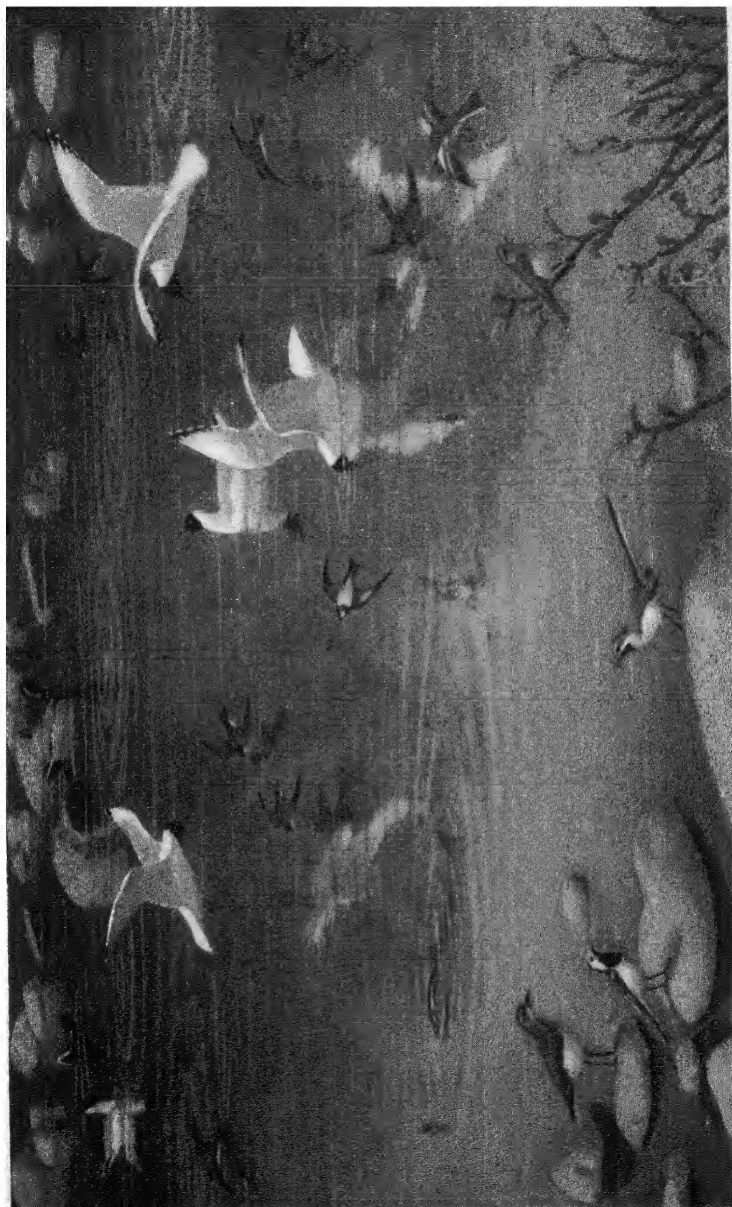
A Lesson from the Kelts (Ex-Diary).¹

"*21st April.*—Although the river remains dead-low, yet to-day (the first time for months) temperature rose and the air was close, muggy, and enervating. The effect on the kelts was remarkable. Throughout the 'glacial epoch'—those months of blighting east-winds, frost and snow—we had hardly seen a sign of their existence. In a whole month's fishing I had only landed half-a-dozen or so. Now they awoke—the whole river was a-boil with them! Trout-fishing became impossible; since instantly that it fell, even the smallest fly was seized and another bootless struggle had to be undergone. Once more the kelts became a living terror. Clearly they had all been lying 'doggo' during the glacial period."

Those kelts, however, proved prophetic. Sunset brought a change. At long last the Fountains of Heaven were opened and all night a warm and welcome rain descended to refresh the thirsty earth. Then we knew. But mark that the kelts had known twenty-four hours earlier! Ichthyic prescience had forwarned *them* that their period of bondage in fresh-water was about to close. With joyous heart, we bade them FAREWELL.

Now, at length all conditions were favourable to the angler. With the subsiding flood, his long-awaited opportunity had arrived. The river ran full and brown, moss-stained from the moors, with big tawny flakes of foam revolving in each eddy and back-water. Moreover its gleaming surface was everywhere adorned with new-born Ephemeridæ—swarms of them. . . . March-browns in battalions, big as butterflies, daintily navigating the rapids or essaying a joyous trial-flight in air. Poor Ephemeræ! born but for a day and that into a hostile world . . . with deadly enemies expectant on every side, all awaiting (as we were) this psychological hour! Seagulls in scores scream

¹ Though here apparently emphasising this particular "lesson" from kelts, yet the prescience of the salmon-tribe (in all stages) in regard to coming changes in weather and water, is a mere commonplace of its life-history—as certain as that day will follow night.



A HATCH OF MARCH-BROWNS ON NORTH TYNE, HOUNTY, APRIL 1924.

and dip: swallows and martins in hundreds skim the surface, all working double-shift to exploit this transient wealth of floating food—even passing beneath the rod. From the fringing alders dash out chaffinches, titlarks, wagtails—even sandpipers—all intent on securing their share in this orgy of death. Besides, unseen in the depths beneath, work the trout, keenest of all to revel in luxuries so long delayed. But the trout, too, has his own deadly enemy on the watch.

Truly this recurrent phenomenon of the spring-tide affords a weird and suggestive spectacle—this simultaneous apposition (beneath our eyes) of an abounding birth of Life, and of sudden Death by wholesale—death while you watch—some such scene as must have inspired Tennyson to charge Nature as “Red in tooth and claw.” Again, poor Ephemera! creatures of but a single day’s life—(if so long!). Tennyson’s charge is true, alike both in substance and in fact, yet perhaps a kindlier interpretation breathes in Charlotte Smith’s lines:—

“Soon fleets thy transient life away,
Yet, short as is thy natal day,
Thou, poor Ephemeron, shall have filled
The little space thy Maker willed;
And all thou know’st of Life be good.”

Despite those manifold dangers that encompass it, the excursions and alarms, Ephemeron nevertheless epitomises the joys of life—shortlived, but frivolous and light-hearted—the philosophy of *opera bouffe*, “Cheer up, Cully, we’ll soon be dead!”

Actual results shall not be recorded, so humble are our ambitions on the Borders, alongside the records from Southern streams. Still, where’er you be, the true gauge of success must ever be *opportunity*? and perhaps a creel of, say a dozen golden-sided beauties averaging a good half-pound apiece—(the fiercest “fighting weight”)—need never be despised

nor invoke a derisive smile.¹ True comparisons never lie where circumstances differ.

Never should the angler neglect to notice the industries of riverside birds, even though these auguries may not invariably materialise. The ceaseless activities of the smaller species—wagtails, titlarks, chaffinches—are obvious evidence of a hatch *in being*: but their sporadic exploration of the waters—fluttering out from the fringing alders—is a fairly reliable index of one *about to occur*. No birds, no hatch, is a safe rule. At the same time, these birds will always be on the look-out for floating Ephemeræ (nor always in vain) though their search may be purely speculative. Gulls also afford useful forecasts. The sudden appearance of a party of blackheads diligently searching the surface, often bespeaks the imminence of a hatch-out. But larine foresight may fail and should these gulls vanish as suddenly as they came, the angler may rest assured that they have correctly diagnosed the situation and that no hatch-off of aquatic insects is due that morning.

It is, after all, but a minute fraction of his daily rations that a trout takes on the surface. Mid-water feeding would rank higher in the scale; but by far the greatest proportion he seeks and finds in the river-bed. One phenomenon, nevertheless, presents a perpetual puzzle. Twice, or perhaps thrice in a season—usually less often—one may see the trout, actuated apparently by simultaneous impulse, engage in a tense and universal onslaught on surface-floating food. For half-an-hour the whole river is a-boil with savage splashes and lunges—one

¹ Local generalisations are usually open to a suspicion of exaggeration. The above may be corroborated by mentioning that an exact record of the trout caught at Houxty showed, in pre-war days, an average weight of three to the pound, and that that average has since shown a steady increase. For the whole season of 1925 it actually exceeded half-a-pound apiece. My friend, Mr Arthur C. Kent, Editor of *The Flyfishers' Journal*, who kindly perused this chapter, writes me:—"My view is that a half-pound average is very good indeed on any water except a chalk-stream, and I don't think one could do better on any river in the kingdom." In his *Fly-fishing* (1899), Sir Edward (now Viscount) Grey writes:—"Any north-country stream of size corresponding with the Coquet, in which the trout average three to the pound, would be first-rate trout water."

had hardly believed it contained so many trout! in fact, there occur blank days when the angler might almost doubt their very existence at all, but for the recollection of such a sight as this—perhaps a twelve-month before!

Notable it is how all trout (and salmon alike) are governed by a common impulse. It differs from day to day, or hour to hour; but at any given moment actuates one and all equally. There is neither heresy nor schism in their communities.

Now, on the chalk-streams of the south, we read that the dry-fly angler awaits *seeing* the “rise” before presenting his lure. Under the conditions of these Border streams, he might not make a cast all day, since never a rise might he see. Equally clear it may appear, how greatly the northern angler’s difficulties are then enhanced; for he sees nothing; never a sign is revealed *on the surface* of what is passing below. There is no forewarning; no preliminary notice is vouchsafed—not till a slight tightening of the line, scarcely perceptible, announces that fraud has triumphed once more! The triumph is oft short-lived, for, unless the angler’s response be equally electric, the fraud is detected and the trout has gone, rejoicing. To-day (23rd April) the writer so far succeeded as to encreele ten beauties scaling 5½ lb., but left “hostages” in the jaws of two others—a catastrophe precipitated by that effort to rival the speed of lightning. Senile activity is apt to fall a decimal point or two below that of the electric fluid. But for that, the creel should have held a round dozen in the two hours’ engagement.

It remains among anglers a standing marvel how a trout in rapid water can seize a fly and yet escape being hooked. The feat appears impossible. Probably, in nearly every case, the explanation is a bagged line. On a perfectly plumb line it *should* be impossible. With a long line out, and particularly in water where currents of varying speeds may intervene between the angler and his furthest flies, a method of maintaining that *straightness* and “personal contact” which are so vital, is to keep drawing in with the free hand, say 3 or 4 inches of line every three or four seconds—the running-line being held meanwhile between the finger and thumb of the hand

which is grasping the rod. This applies equally both to trout and to salmon fishing. In the latter case, however, the hold on the main line must be *extra* firm—almost rigid—else the sudden snatch of a taking fish may drag it right through one's fingers.

A potential "thrill" in the spring-trouting on most Border rivers is the ever-present chance of falling in with a new-run salmon—what a joy to see that shapely form as he flings himself high in air just below the throat of some favourite stream! Then, if the salmon-rod be at hand (as it always should be), the angler may, within ten minutes, be revelling in quite a different sensation. Spring-salmon mostly run small; but I have got 20-pounders in the early days of April.¹

The March-Brown (*Batis longicauda*).

During early Spring a big hatch of March-browns presents a stirring spectacle—air and water alike alive with fluttering forms, and every one of this single species of insect; but it by no means imports—much less assures, a corresponding measure of success. Amidst plethora of delicacies, it is long odds against the pampered trout selecting any particular specimen. The angler may watch a dozen—a score of the natural insect snapped up, while his own invitation seems studiously ignored. He has a remedy. Let him replace the March-browns on his cast by something totally different—say a red- or orange-bodied spider (oft deadly), a blue dun, or grouse-hackle (though nothing remotely resembling these creations be on the water)—and the change acts like magic. What the precise reason may be—whether the fastidious fish are already satiated with the swarming "long-tails" and welcome the stranger as a delicious entrée, or otherwise, 'twere delving too deep into their economy and epicurean perceptions

¹ In 1927 North Tyne was fully stocked with spring-salmon as early as March, and even in February. Hardly a pool seemed untenanted. These were mostly big fish, running from 15 to 20 pounds and upwards. By August, after a diluvial summer, the whole river swarmed with them. In October, from my window, I watch them wantonly wallowing in the strong stream-heads, flowsing, leaping, and splashing—several in sight at once, like a pack of school-children bathing!

to state definitely. But during a heavy hatch of those insects, a March-brown is not the most effective lure. It has been remarked that the most successful "wet flies" are often those that least resemble flies at all!

Quod non est simulat, dissimulatque quod est.

The Floating Fly.

POSTSCRIPTUM.—Since writing the above—possibly inspired thereby—I essayed trial with the Dry Fly. Hitherto I had feared both that the system was ill-adapted to our rough streams, and also that its practice was beyond my skill. Both fears seemed to vanish like magic at that first time of asking! For trout after trout responded gallantly—bigger and better fish, too, than any sunk flies would have tempted. A second and a third morning were attended by the same happy results, so that I began (prematurely) to imagine the process was as easy as falling off a log. The fourth day, however, cast a shadow of doubt over that glamour, and after that (May 1927) a spell of low water, with bitter east winds and night-frosts, forbade further chances for a whole month. It would be absurd, in any case, to draw deductions from such ephemeral success; nor, probably, would my crude style be dignified as "dry-fly fishing" in its classic sense at all. For I never awaited seeing a rise, but simply directed the floater (on short line) to spots where *I knew* trout were sure to be. The work seemed the analogue to fishing with the "clear-water worm" and, at first glance, even easier than that highly artistic branch of angling: inasmuch as one could *always see* the floating fly coming down, perkily cocked on the waves or navigating roughish rapids, whereas the worm one never sees—only feels! Moreover, the trout's rise to the floating fly—even his antecedent dash *before* seizing it—are all plainly visible and on every occasion (save one) I got a firm hold. Curiously, on the few occasions when a trout was seen to take a natural fly, that fish could never be induced to try the artificial! One lesson learnt from these few hours was that—fastidious as we well knew Fario to be—with the floating fly, he is yet more fastidious than ever we knew before!

CHAPTER VI

MEMORIES—FAR AND WIDE (BIG-GAME)

PROLOGUE.

WHAT multitudes of memories crowd in upon the retrospect of a long and active life—incidents of forest, flood, and fell; ventures with wild beasts and wildfowl, many that in these latter days would be denominated “thrills.” That term, quite probably, might be justifiable enough: but in a previous generation a measure of modest reluctance influenced writers to shrink from anything approaching sensationalism. There was a fear—nowadays superseded—that such writing might be confused with an ambition unduly to magnify personal exploits or dangers. It would be difficult to deny that encounters with dangerous game—say lions, elephants, buffalo, rhino—when the issue of success or failure (with all that the latter might import) hung evenly in the balance over perceptible periods, might without hyperbole be described as “thrilling.” Yet in the writings of the old Masters of African Game—Selous, Arthur Neumann, Baldwin, Oswell, and the rest—one reads of hair-breadth escapes told in cold, matter-of-fact terms. That older style had at least the advantage of holding back *something* in reserve; whereas to-day one often sees—even in comparative trivialities—the resources of the vocabulary used “all out.” Individual temperaments, moreover, differ widely and, in my view, the sensations evoked in moments of real danger would quite inadequately be described as “thrilling”—that is, assuming it to be possible so precisely to analyse and to classify human feelings in a crisis. So completely must a man’s whole attention be concentrated on the one vital object—that of keeping his own end up—that there is neither time nor opportunity for extraneous joys such as thrills—though it is quite probable that

against the savage wild-boar generates a spirit of mental exaltation that is akin to a continuing thrill. That glorious frame of mind, in this instance, continued for two or three days—precisely so long as the sensation was general. The moment it developed into the particular, then the mental attitude also changed with lightning-flash.



VULTURES IN SPANISH SIERRA.

Our quarry on that special day was one of those grizzly old tuskers whose holt is amidst the wilder recesses of Spanish sierra. That that game old boar—not without sundry savage onsets on dog and man—eventually succumbed, is history ; but does not concern us here. For it is of a mere interlude, of a momentary by-play, that I wish to write. The main pursuit was in full swing, hounds in full cry, guns all separated, and myself struggling down a fearsomely abrupt couloir, horrid with jagged rocks and thorny jungle intertwined ; when, close below, the bay of a separated hound was followed by the apparition of a second boar bounding almost directly towards me across

a narrow opening. The crisis found me half-standing, half-scrambling among hanging boulders; and the first hurried bullet crashed upon a hoary rock 6 inches too high. Instantly the boar shifted course, straight in, and the mood changed . . . the situation had developed into the "particular." There was now no time for thrills—only for action. The fact of a hundred-weight-and-a-half of ferocity incarnate charging full-face at ten yards had an instantly sobering effect. . . . That thing must be stopped . . . and the second bullet (3 inches above the eye) did it effectually.

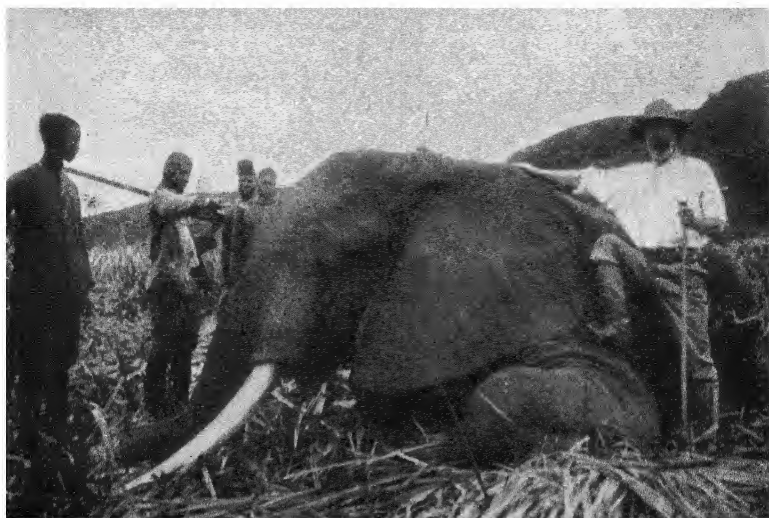
This was my "first lesson" in tackling big-game. It impressed me at the time and has been useful ever since.

II.—IN SPITSBERGEN, 1st August 1881.

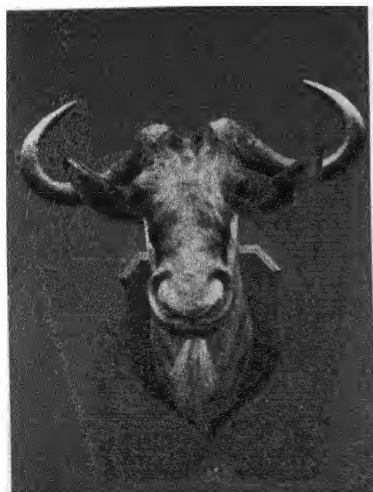
Half that morning our advance, regarded as a hunting-venture, had been held up: but the cause of delay compensated, since during these three hours our eyes had been entranced by an incomparable display of Nature's stupendous forces in direct conflict.

The scene was laid in Axel Bay, one of those weird arctic inlets that discharge into Belsound. This bay is almost closed by a long black rock-island running athwart its embouchure, leaving but a narrow open channel at either end. To-day, down the western outlet, a strong ebb-tide was driving seaward mountainous masses of ice, floes, and bergs varying from the size of a cottage to that of a village church. The whole inner surface of Axel Bay, so far as eye could reach, was crammed with heavy ice, all moving, and the congestion, as the tide-impelled pack forced its passage through the narrow sea-channel, presented a wondrous arctic spectacle. Crushing, groaning, and grinding forward, the accumulation of surging bergs kept piling up, floe upon floe, in quivering pyramids, till each in turn toppled over in disrupted ruin, while an unceasing roar, as of thunder, reverberated around.

At intervals, this thunder-effect was reinforced by violent explosive reports that no 100-ton gun could rival; and this, we



A 100-lb. tusker British East Africa, 1906.



Brindled Gnu. 28½-in. Span.
Athi River, B.E.A., 1906.



Roan Antelope. 33 inches.
White Nile, Sudan, 1914.

TROPHIES FROM AFRICA.

[To face p. 80.

found, was the cause. For miles the opposite shore was occupied by a vast "stratified" glacier whose sinister green face seemed to reach 60 or 80 feet of altitude. Only the grim, forbidding front was visible, since low on its convex surface rested a mass of grey cloud: but below, at sea-level, opened vast ice-caverns whose inner recesses gleamed with a mysterious refulgence, as though inlaid with gems and brilliants—the interior ice sparkling with a radiance of sapphire and emerald beyond words to describe or pigments to depict. Against this intruding glacier-face, the incessant impact of ebb-driven ice-floes raged with equal fury as it did on our own rock-isle: with the result that vast fragments of living ice, tall as cathedrals, split asunder from the parent glacier, rending apart with a shrieking crash as of pain . . . then slowly toppling over in majestic ruin upon the chaos below.

While the ebb-tide ran at strength, the violence of this scene beggared any paltry words of mine to describe; yet only an hour or two later, on the slack of the tide, absolute peace reigned supreme! Ice-floes that had fought like lions now floated innocent as lambs; and on a flat-calm sea we proceeded in our *fangst-baad* (hunting-boat) through the channel where just before such tumult had raged. The inner waters of Axel Bay were still studded everywhere with ice-floes and bergs of every size and many of weirdest form—some might be likened to marine monsters, or to a giant octopus in its death-throes. Amidst these we pursued our inward course. One thing only seemed lacking to add a fitting climax to the arctic sensations of that day—the appearance of a Polar bear: and presently our Norsk harpooner, the veteran Kjeldsen, whispered *Ishjorn* (Ice-bear). Afar beneath hanging pall of ice-blink and sea-mists we descried, prone on a flat floe, the pale yellowish form, all glistening with salt water like frosted silver. Towards that sleeping beauty our rowers—men long practised in these arctic pursuits, each facing forward (pushing rather than pulling)—steered with finished skill and silence; "stalking," as it were, from berg to berg, till a range of 100 yards was reached. Then a

rifle-shot rang out and instantly the sleep of Nature was changed to the sleep of Death. Not a struggle nor the slightest movement was perceptible. Our prize, however—as we had, of course, realised long before arriving within range—was not an *Isbjorn*, but one of the big Bearded Seals (*Phoca barbata*) of the Spitsbergen seas.

The man who fired that shot was my good old friend Phillipps-Wolley ("runner-up" for the Queensberry Belt), who, a dozen years later, edited the *Badminton* volumes on "Big-Game," and who died in the closing years of the War as Sir Clive Phillipps-Wolley—*R.I.P.*

III.—ON THE ROOF OF NORWAY.

From earliest dawn Nils and I had been specering, one after another, some of those stupendous gorges that radiate from the vast shoulder of Hallingskarver, a mountain-mass of 6000 feet—one of the giants of the Hardanger Vidden. These plutonic corries, though to outward appearance a mere chaos of barren rock-ruin, do produce in favoured nooks a scant growth of grass and mosses, and form a well-reputed pasturage for reindeer—that is, what these specialised creatures are content to regard as "pasturage," since any herbivorous animal of normal appetite would probably starve within a week. By sign and spoor, nevertheless, we knew we were within measurable distance of deer and hopes ran high, though so far not a living thing had rewarded our search. Towards noon, a north-east breeze, blowing across a sheer 100 miles of glacier and snowfield, brought up masses of mist—at first light and discontinuous, but gradually growing denser till presently all view was blotted out. We struggled on a few hundred yards farther and then took shelter beneath some vast grey monoliths to await events. At the end of an hour, being then reduced to human icicles, there came one of those thrills that can set even congealed blood coursing once more! In an inter-space between two opaque cloud-masses, we dimly viewed amidst flying murk—and only for ten seconds at that

—a vision of horns . . . horns the like of which neither before nor since have I seen in Norway. Rather they resembled the weather-blanchd branches of a huge uprooted pine. The vision so vouchsafed was on a skyline above and not 100 yards



NORWAY—BULL-ELK IN THE SUB-ARCTIC FOREST.

away. Only the two vast upstanding antlers were in view, the head and whole body of the lying beast being hidden behind a boulder. "Five feet long if they're an inch," was my estimate . . . "by 4 feet span," and Nils agreed. Now I had already shot two reindeer-bulls whose horns went well over 4 feet—(51 and 52½ inches to be exact)—so a 60-inch

head was not outside the range of possibilities, though I doubt if in those days (the 'nineties) another such existed in all Norway. . . . Then that icy mist closed down again, thicker than ever, and shut out all view. Great upstanding rocks, that we knew to be within 20 yards, had utterly vanished from our sight. Not Tantalus, hardly even Job himself, was ever more cruelly entreated! To find ourselves actually bivouacked—and that by the merest luck of chance—within easy shot of such a trophy—and then! Half-an-hour later the sun shone resplendent in an azure heaven, but . . . the prize had gone. We found his bed—still warm—and a snowfield beyond showed that he had moved off quite slowly—at a walk; and even stood still not 20 yards farther away. Beyond that snowfield was hard unyielding rock—"cold boiled mountain"—that yielded neither trace nor clue, and never another sign could we discover of our lost friend. To-day, after thirty-odd years, I recall that thrill and envisage those mighty horns . . . and the disappointment rankles keen as ever deep down in my breast.

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The fjeld-shooting in Norway at that time was both free, unlicensed, and unlimited (to natives)—hence the final fate of that noble stag probably came from the ancient firelock of some dear old Norsk pot-hunter, whose first act would be to cut off and chuck aside both head and horns as so much useless lumber, not worth carrying off the hill! How much nobler a destiny to be hanging on my walls at Houxty and immortalised in Rowland Ward's *Records*?

On one of these occasions, my brother W. and I, after spending three weeks among the snowfields and glaciers out on the "*Roof*," fell in with a party of tourists at the steamer's departure station. Next morning at breakfast, one of these friendly travellers asked my brother if he had "been up to see the *glazier*," and W., hardly comprehending, replied that he had no windows broken.

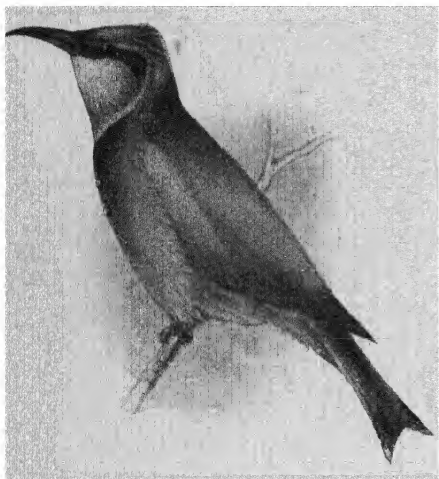
IV.—“BENIGHTED”—IN THE BUSH-VELD OF
NORTH-EAST TRANSVAAL.

Quite early in my African ventures, and before I had learnt the craft of the veld, or shot anything bigger than bush-buck or duiker, their befell a disastrous day—or, to be honest, a day of bungles. For that morning I had clean missed two fair chances—first at a zebra, that resembled a figure in fretted silver as, amid thin forest, he caught the horizontal rays of a rising sun: next at a sassaby—and also mishandled a stalk at a trio of sable antelope, one of them a good bull. For the instruction of those who preach false doctrines about “Colour-protection,” I may add that the feature which revealed these three big antelopes to me (at 200 yards) was the twin pair of conspicuous parallel stripes of white which adorn their faces—otherwise, in the gloom of thick bush, their dark forms would certainly have escaped detection.

Feeling utterly disgusted with myself and with the world at large, an equal mind was not recovered till, towards noon, we struck a charming little “water-hole,” all shaded above by bosky foliage and the rendezvous, at the thirsty noon-tide hour, of a wondrous concourse of bird-life. Instead of returning to camp, I therefore decided to spend the hot hours here and to devote the afternoon to retrieving the disgrace of the morning. Two hours’ rest in this secluded Eden, along with the stream of feathered beauties—all total strangers to me—which in constant sequence came to share our tropical drinking-place, completely restored my shattered spirits. Would that I could describe what I saw! First came the curious mop-headed louries, or touracos (*Musophagide*), big birds of gorgeous hues, sheeny in purple, green, and crimson, with great bushy topknots, snub-noses, and exaggerated tails—suggestive of cockatoos, especially in raucous voice—“Go-’way birds” in the language of the veld: then there came thrushes of new sorts—babblers, I supposed—with lustrous glossy-starlings iridescent in every shade of blue from pale azure to deepest *Lapis lazuli*—resplendent, these, in the sunlight. There were green parrots of arrow-like flight;

weaver-finches in black and gold, others that sported waistcoats of orange and chestnut; buntings with pied head-gear and richly striated mantles. There were unknown flycatchers, golden orioles, hoopoes of sorts, bee-eaters, collared doves and Namaqua pigeons, with a confusing variety of I know not what besides.

On starting afresh, my two Kaffir "boys" were for making towards camp; but I was in no such mind till I had wiped out



the morning's blunders, and told them I would carry on till I had got *nyama* (= Game, literally "meat"), especially as, afar off, they had sighted a herd that looked like Sable. These we followed for hours, eventually trying to cut them out by a long run — after which we saw them no more. The sun was now sinking and I noticed my Kaffirs paying special attention to his direction, as well as holding grave discussions. Soon it became

evident that they were beyond their known zone of country—in short, we were lost. It would have been wiser to call a halt and at once to improvise a shelter for the night: but, being hot-headed, I pressed on farther and farther into the unknown until, long after dark and soaked with dew, we struck a big dry river-bed that I half-recognised (having crossed it some days before) as the Manzantont—remembering also that it was a famed resort of lions.

Here we set to work with hatchets to build a *scherm* of thorn-bush, first starting a big bonfire, with a pile of cut grass to serve as my bed, drying before it. Another hour's work it cost to collect sufficient firewood to last out the night—the dark hours in this latitude being bitterly cold. Besides, there were the lions.

On reflection, the situation did not improve. A steady rain had set in, and we had neither shelter above nor a bite to eat or drink—it was, as events fell out, just twenty hours ere a drop of liquid irrigated my gullet. The one bright spot was the behaviour of my two Kaffirs, Klaas, *alias* “Libombo Jack,” and Tea—their names shall be immortalised. The scherm was horseshoe-shaped with the fire at the outlet and my grass-bed in the centre: my two good Savages lay themselves down outside the opening—just where a prowling lion could most easily pick them up! Moreover, all night long they took it in watches to look after me. Each time I turned over, one or the other came in to replace the grass-coverlet—no “nursing sisters” could have been more tenderly attentive. Now the dominant idea in South Africa in those days was that any courtesy, or even common civility to a Kaffir would certainly be mistaken for weakness—a doctrine to which I could never subscribe. My hunting-pal, whatever his colour, is a friend, who shares triumphs and laments failures equally: and never have I had cause to regret that attitude, whether in South or Central Africa, or in the Sudan. Months afterwards, when finally bidding good-bye to “Libombo Jack” (with a small tip and a pocketful of ‘baccy—“best Transvaal” at eighteenpence a pound, and dear at that!), that good Savage protested that “his heart had turned white when a Great Induna from over the seas (that’s me!) had shaken hands with him.” No, the Savage is often a natural Gentleman and I (nearly!) always like him.

Well, when dawn broke my guides were keen to start campwards; but having lost faith in their sense of direction, I decided to stop where we were, firing a signal-gun at intervals, and await a relief-party. When the morning wore on without a sign, I determined to follow the Manzantont in hopes of picking up our old wagon-spoor (though not sure whether it was up or down). Luck, however, helped; we found the track and thenceforward our course was all plain-sailing, though the distance was quite unknown and my suffering from thirst had become excruciating. Hunger one can master; but thirst . . . no. Lips crack, tongue swells, the sensation agonises.

From a moist creek the Kaffirs, by digging, got a few mouthfuls of fetid green scum that looked fit to hatch crocodiles: but I held steadily on, on, on, till—oh joy! a couple of hours later I sighted some of our bullocks grazing in the bush and knew camp must be close by. Then the white pyramid that represented my home on the veld told that one more ordeal was overpast—



ROAN ANTELOPE. Transvaal, 1899.

but no "long drink" as yet. Parched gullet and swollen tongue demanded more gradual liquidation . . . but it came in time.

V.—IN THE BUSH-VELD OF NORTH-EAST TRANSVAAL
(Now the "*Sabi Sanctuary*").

In the open woods within a mile of our outspan upon the N'Guanetsi river, a lion had killed and partly devoured a zebra; moreover, two nights before a lion had raided our camp and carried off a fresh waterbuck skin pegged out within 15 yards of my tent.¹

¹ My Diary of next day records:—This was not *one* lion, but a troop of four or five. How silly I feel now to have been rambling around in pyjamas in the dark, looking after my head-skins at the imminent risk of my own skin!

That night, therefore (18th July 1899), I awaited His Majesty's return in a cartel fixed up in the branches of a tree within 30 yards of the zebra carcass. A cartel, I should explain, is an open wooden framework, six feet by two, interlaced across with thongs—a thing that, on the veld, is dignified with the status of "bedstead." As a base upon which to sleep, there was a doubled waterproof ground-sheet with a couple of blankets to roll up in. The last hour before dusk I busied myself making this arboreal cyry as tenable as might be, hanging my belongings on convenient boughs. Then a sandwich with a pull at the cold tea, and I settled down to watch—watched myself by a piping hornbill (*Lophoceros*) and several inquisitive Green monkies. The moon was in second quarter and due to set shortly after midnight: hence my chance of a shot was limited to the six hours before moonset, or (better still) at the first peep of dawn.

Half-an-hour after dark the low sougning call of a lion in the creek close by—twice repeated—brought every sense and nerve to full tension. A second call, rather farther away, seemed different—possibly that was a leopard; but nothing appeared within view—not even owls or nightflyers, after the doves and francolins had ceased their evening chorus. Now six hours represents a long vigil and, as the keener hope receded, so a tendency to dose off became all but irresistible. Still, I was alert enough, on the stroke of midn'ght, to realise that *something* had come. Already I had seen shadowy forms flitting around in the moonlight—in actual fact, it is rather the shadow than the form that catches one's eye; but these were small and I put them down as Servals. But this new-comer was an immense brute and already I could hear the rending and crunching of bones. No clear view was revealed since the raptorial was hidden behind the zebra and for long minutes a tense excitement reigned supreme—face to face at last with the King of beasts! Then the great grey form backed away, struggling and tugging at some anatomical titbit . . . and I saw. Oh! the disappointment—it was a great gaunt hyena. Now the moon was already lowering to the tree-tops; in

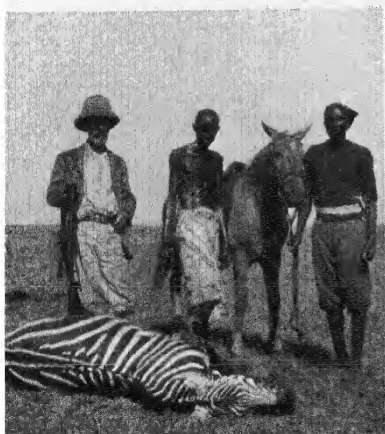
half-an-hour it would be dark. Therefore I accepted the chance-in-hand and a Paradox ball in the neck laid out the spotted scavenger flat. Then I composed myself to sleep till dawn. But *Dûs aliter visum*.

In the small hours there burst forth one of those tropical cataclysms—a sudden thunderstorm, accompanied by a wind of hurricane force. The ceaseless play of lightning, both forked and sheet lightning, was superb to watch, illuminating the dark forest-glades as by day; while peal upon peal of thunder roared and crackled close by in almost unbroken sequence. Then the windows of Heaven were opened and down crashed rain in cataracts. Meanwhile I had been struggling to drag out the waterproof sheet from beneath me; but the difficulty that job presented—on a 2-foot framework swaying wildly in the wind—can be more easily imagined than described in print. The situation was as though one lay out on the cross-trees of a barque plunging ahead, close-hauled, in a topsail breeze; and soon it resolved itself into a choice between letting go that tarpaulin or going overboard oneself. Of the two evils I chose the lesser. One of my two blankets, moreover, followed suit and I was left to weather out the night peel-wet, lying on naked rain-tautened ropes hard as wire-cables, and with only one soaking blanket for cover. 'Tis wasting words to dwell on such contretemps—they *will* occur . . . they have to be endured, and the less said the better. Luckily the storm ceased as suddenly as it had begun, and an hour later the Southern Cross and glorious star-spangled sky of South Africa shone overhead.

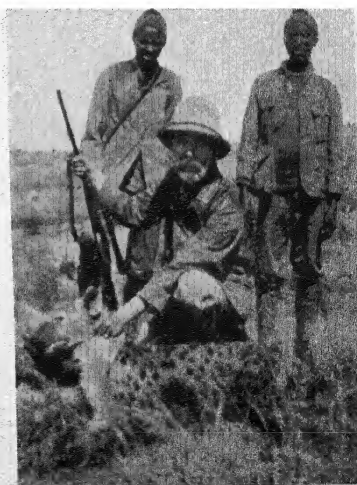
A yet more serious consequence befell — with all these fluttering scarecrows—blankets and tarpaulin—stuck on bush and branch below—the chance of a shot at dawn had vanished. No longer could one console oneself with the hope that these nocturnal miseries might be compensated by a prospective triumph at daybreak. Our tribulations we had suffered in vain.



Brindled Gnu, Stony Athi, B.E. Africa, 1906.



Zebra on Stony Athi, 1906.



Spotted Hyena, Lukenia, 1904.

TROPHIES FROM BRITISH EAST AFRICA.

(From "*On Safari.*")

Savage Divination.

During June 1899, while encamped on the Ma-Woomzie river, in the heart of the Bush-veld, and without, so far as we knew, a soul within 100 miles, our Kaffirs one evening gravely told us that the "Great Indaba" at Bloemfontein (between President Kruger and Sir Alfred Milner) had been broken off and that the English were going to fight the Boers.



HUNTING-DOGS (*Lycaon pictus*). Baringo, B.E. Africa, August 9104.

I noted the incident in my Diary at the time and long afterwards, on regaining touch with the world, found that that critical conference had actually broken down on that exact date. By what black magic or second-sight can isolated Savages divine events that are passing hundreds of miles away?

Savage Eyesight.

While following up a wounded Impala, my Kaffir hunter, Klaas, keenly pointed to what he said was the animal lying beneath a leafy bush a full 150 yards away. The glass, however, revealed but a single horn; and this, I concluded, was

a dead branch. Klaas, nevertheless, remained positive, and the result proved that Savage eyesight can exceed in discrimination a powerful prism-binocular. For, on recovery, we found that that impala actually had only *one* upstanding horn, the other being bent downwards.



IMPALA. Transvaal, 1899.

VI.—“BRITISH EAST AFRICA,” NOW KENYA COLONY.

One recalls as it were but yesterday—(after all, it is less than thirty years ago)—the howls of indignation that greeted the project of the Uganda railway. There were newspapers—whose horizon was bounded by the corner of the street—which revelled in reviling the Government of that day—I think it was Lord Salisbury’s—for squandering several millions of “hard-earned wealth . . . wrung from poor overburdened taxpayers,” on a madcap scheme to push a 600-mile railway track through lion-infested bush! At first these shrieking jeremiads received a measure of corroboration when the said lions actually did hold up the work of construction, devoured some scores of coolies, and incidentally added another million or two

to the cost! There were other incidentals not provided for in the original estimates. Giraffes, for example, walked off with miles of telegraph-wire around their necks; elephants and white ants combined to destroy the poles; while three-ton rhinos disputed the right-of-way to intrusive locomotives.

There were those (including the Author) whom the



ELEPHANT EIGHT YARDS LONG.

Lake Solai, B. E. Africa, February 23, 1906.

impugned project struck in quite a different light. To them it imported 600 miles of virgin wilderness opened up to hunter and explorer by what Roosevelt described as "a railway in the Pleistocene," and personally I decided to take out my dividends in kind. A first and purely superficial glance might, in those early days, have conveyed some suspicion that, in one sense, the croakers at home had some reason. For the first-comers—prospectors and big-game hunters—literally had both railway and country all to themselves (presumably at the cost of the said tax-payer?)—a glorious 600-mile preserve teeming with

big-game and a variety of strange types of wild-life the like of which they had never seen before, nor their philosophy ever dreamt of. Read *On Safari* and realise that! Nairobi was then a Tin Capital, without a building beyond rude timber-shacks, and the bulk of its "citizens" still abode in tents. Its population now exceeds 40,000.

Not a British steamship line then served the East-African coast. My own first voyage to Mombasa was aboard an



ORYX BEISA. Lake Baringo, B. E. Africa, August 1904.

Note extreme thickness of neck in both Oryx and Roan antelope (at p. 88).

Austrian-Lloyd from Trieste—she had only seven passengers and the captain told me that our outfit represented a fair proportion of the cargo: so the *Austrian* tax-payer must also have contributed to our joy-ride?—the next by a German ship, the *Burgermeister*, and homewards by the *Kansler* of the same line; others by Messageries Maritimes' steamers, which called at East-African ports on their route to Madagascar.

Those were glorious days—days spent in a primordial world. They bequeath vivid memories which will never fade while life lasts—memories of encounters with the biggest beasts

that still roam our earth, both the savage and the subtle: and of happy months spent within the inmost Green Rooms of wild Nature. There will be found in this book pictures which faithfully attest and perpetuate a few such scenes and stirring episodes—the details of which, however, had already, in some cases, been described in my two former works on Africa. For, though the sentiment is certainly unjustifiable and perhaps presumptuous, yet the Author constantly assumes—subconsciously—that present readers will already be acquainted with his previous works; if not, fresh joys await them! The late President Roosevelt wrote me that he had “read my books from the beginning and some of them he almost knew by heart.”

Truly that handful of Pioneers drew their Uganda railway dividends on a generous scale—at the rate, let us call it, of a thousand per cent.!

That epoch proved very transient. Perhaps we are using up this old world of ours at a pace that cannot last? Within a decade, that narrow ribbon of steel, a yard wide and 600 miles long, that we had come fondly to regard as our private property (!), was already enveloped by British Settlements, by grazing farms and plantations—signs of incipient colonisation; also of British grit and enterprise. Where, the year before, the hunter could put up in the Left-luggage Office (beds provided by the U.R.), free to wander far and wide—now he found himself confronted with the genesis of wire fences and ominous notices that bespoke private ownership. Already in 1912 the vast voids of East Africa were fast filling up—the construction of the Uganda railway had been a wise and far-sighted policy. The following table showing its net receipts goes to prove that:—

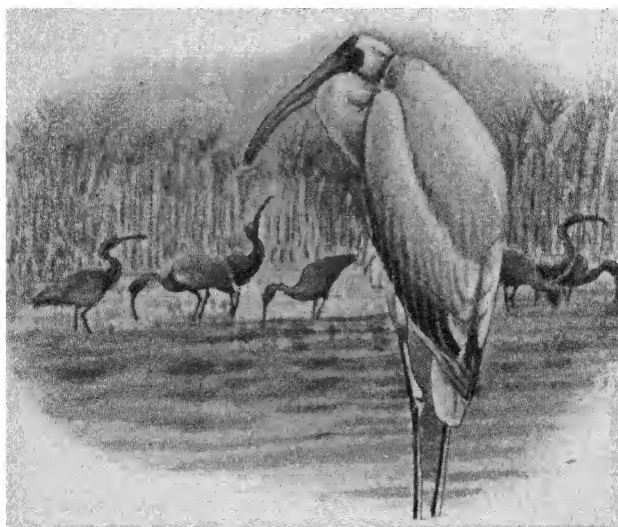
1904-5—Net receipts	.	.	.	£2,639
1906-7—do.	.	.	.	76,150
1926—do.	.	.	.	841,937 ¹

¹ The actual figures for the year 1926 read as follows: Earnings £2,058,710, less working expenses £1,216,773, showing the net profit above stated, £841,937. For 1927 they will probably exceed a million sterling.

To-day what was once poor despised "British East" is rapidly developing as Kenya Colony into a junior member of our world-wide Empire of Nations. What do the croakers of yesterday think of that?

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Personally, without awaiting further shocks — such as, figuratively, "Don't walk on the grass" . . . or "Please don't pluck flowers"—the Author promptly switched off into the No-Man's Land of SAVAGE SUDAN.



BIRD-LIFE ON LAKE NAKURU.

CHAPTER VII

THE SPANISH IBEX (*CAPRA HISPANICA*)

I.—THE SHADOW OF DEATH.

THE SPANISH IBEX being a species peculiar to the Peninsula, and withal a strikingly handsome Game-animal—easily the First Prize to a hunter in all Spain (if not in all Europe)—it naturally formed a main objective of our earlier venatic ambitions in that country. The story of those strenuous efforts to secure a few trophies has already been lovingly told in our two books on Wilder Spain—(in 1893 and 1910). That was forty years ago; but among those ancient memories few remain more vivid than our surprise and disappointment to discover how perilously near to total extinction the Spanish ibex had already been reduced on several of those great mountain-ranges which, during the ages, had formed its ancestral strongholds. Nowhere, in those days, was Protection afforded it: everywhere the lish-limbed mountaineers, who alone shared these alpine solitudes (themselves well-nigh as agile as the wild-goats), carried guns and shot the vanishing ibex—regardless of size, sex, or season—whenever opportunity offered. By the close of the nineteenth century the scant remnants of the race in the great Sierra de Grédos had been reduced literally to units; nor is it too much to say that another ten years would have witnessed the last of this noble game-animal wiped off the face of the earth in its main haunts—a Fate which has, in melancholy fact, overtaken the ibex both in Portugal and the Pyrenées.¹

¹ There were other isolated colonies of ibex which had also suffered total extirpation—such as that on San Cristobal in the Serranía de Ronda, within sight of our Spanish home; besides, doubtless, various remnants on segregated mountain-ranges elsewhere throughout Spain.

By supreme good fortune, ere the fatal hour had struck—as it were, at the eleventh hour—a *Deus ex machinâ* intervened. The co-authors of *Wild Spain* became associated in the Coto Doñana and elsewhere with Spanish friends in whose hands lay the power to save the situation. There thus occurred opportunity of pointing out the impending peril to some of those great Spanish land-owners within whose titles were included vast regions of the chief ibex-haunted Cordilleras; but who, at that time, were only vaguely conscious of the existence of ibex on their remote and ill-accessible domains: while none had then realised that the threatened race belonged to a species endemic to Spain—that it was confined to the Peninsula and known nowhere else on earth.

At first sight the practical difficulties of affording any effective Protection to wild animals on such vast areas of mountain-solitudes—some extending to, say 60 to 80 miles in length and rising to over 8000 or even 10,000 feet in altitude—might well have been deemed insuperable, not to say appalling. At home we have no such fearsome propositions. These Grandees of Spain, nevertheless, rose to their occasion in the spirit that overwhelms difficulties—as it overpassed our utmost hopes—the spirit that emphasises the traditional chivalry of their race, and of Spain. All honour to them.

Spontaneously, they ceded in perpetuity the Rights-of-Chase to the King of Spain. His Majesty accepted the Trust and commissioned the Marqués de Villaviciosa de Asturias to organise the great Sierra de Grédos, as well as the Picos de Europa in the Cantabrian chain, as “Royal Reserves”; the identical goatherds (our old friends) who had hitherto been the most deadly enemies of the ibex, being now transformed into their Royal guardians! No happier selection could have been made: for it is no exaggeration to describe these lithe mountaineers as a specialised human type—bred during generations (like the ibex themselves) lightly to traverse regions so terribly rugged and abrupt that even the strongest and most active of normal build can only crawl.

[Appropriately may here be interpolated a remark of theirs

which was so apposite as to remain graven on my memory after all these decades. The incident occurred on that supreme afternoon when at last, with hungry eyes, we marked half-a-score of ibex feeding beneath some beetling precipices where the game could obviously be approached from above. Bitter memories of labour in vain, of dozens of disappointments, vanished as a dream, with this vision of a final triumph. It was short-lived. Our wild men proposed *that they alone* should undertake the enterprise. "You *alone*, why?" "Because," came the reply, "*Ustedes no tienen pías*" = "Your Excellencies have no feet. You could not reach that Risco before dark." Alas, they knew; but it came as a bit of a shock, for in these days we rather fancied ourselves!]

The happy change occurred in 1905, and the results of Royal protection have been equally surprising and gratifying. From the start, the scant remnant of ibex increased and multiplied so rapidly that within the first few years of absolute "Sanctuary," their numbers were approximately estimated to have reached between 200 and 300 head, while shortly thereafter it was even deemed desirable to pick out some of the older and redundant rams. Within less than ten years the ibex on Grédos were reckoned at 500: and here it will be appropriate briefly to glance back at the tiny nucleus from which those hundreds had emanated.

Forty years ago, or at the period of our earlier expeditions, there might still remain at the utmost one hundred head of ibex, all told. By 1896 that sorry remnant had been reduced by one-half—fifty was the estimate we gave in *Unexplored Spain* (p. 141), a figure which was confirmed by Dr Angel Cabrera, as cited in his standard work, *Fauna Iberica*, p. 320 (Madrid, 1914). So rapid, after that, was the process of extirpation that by 1905, when Royal Control was established, it was virtually all but an accomplished fact. Certainly at that date no more than a few units remained—indeed Dr Cabrera gives the census as "One old ram, seven females, and three or four kids." That, however, in view of the subsequent increase, may have been an under-estimate and, of

course, in so big a terrain, no exact computation was possible. Still it is clear that Royal protection came in at the very nick of time—the ibex had had the narrowest possible escape from total extinction.

To turn to the happier aspect—Since 1914 the cumulative increase has been rapid and continuous, as the following details kindly sent me in January 1927 by His Excellency the Marqués de Viana, Montero Mayor to H.M. King Alfonso, speechfully testify :—

“Since the Coto of Grédos was established, the race of *Capra hispanica* has gone on increasing in number in an ever-ascending ratio till, at the present day, they may approximately be reckoned at 1000 to 1200 head. The proof of their abundance may be gauged by the enclosed table which shows that at the last *Montería Regia* (= Royal Hunt), during $2\frac{1}{2}$ days in July 1926, there were obtained 83 ibex-rams—a total which, nevertheless, does not exceed the results of some preceding years.”

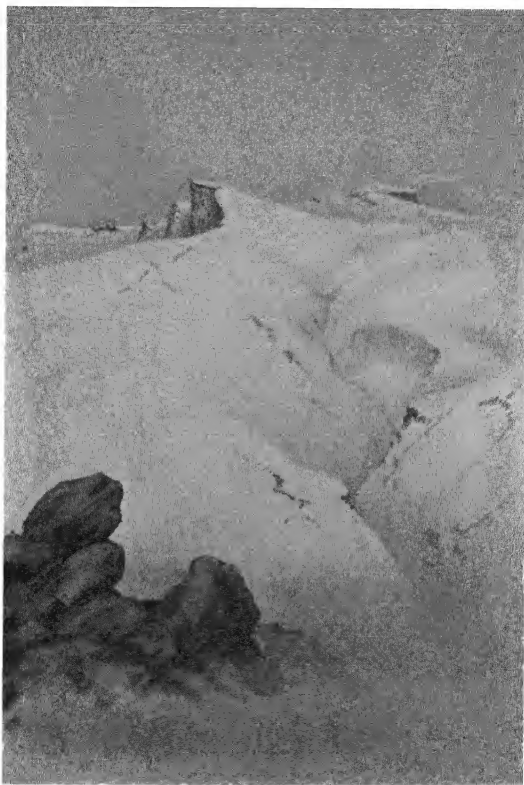
This surely bespeaks a marvellous transformation? Compare this abundance with the melancholy memories of twenty-five years ago, when a sorry remnant was barely holding out on those majestic altitudes that encompass the snow-clad Plaza de Almanzór! To-day, without the slightest danger to their race, an annual toll of 80 or 100 head can safely be levied, where only yesterday the ibex had been reduced to units.

[It grieves to have to add that on 5th April 1927—only a few weeks after penning the above Note—the Marqués de Viana died in Madrid, while yet in the full pride of life and strength. The following remarks are extracted from an obituary notice in *The Times* of 7th April :—

“The Marquis de Viana occupied a unique position at the Spanish Court. As Master of the Horse, Grand Huntsman and Lord Privy Seal . . . he had served His Majesty since the coronation. . . . He was an excellent horseman and polo-player, a great huntsman and keen agriculturist, as well as the largest producer of olive-oil in the country. With him disappears one of the strongest personalities in Spain—a great Nobleman with a mediæval temperament but a modern mind.”]

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In the great Sierra Nevada, with its twin system of the Alpujarras and their subsidiary ranges, a certain stock of ibex had always held their own—protected chiefly by the vast and



THE APEX OF ALL THE SPAINS, CORRAL DE LA VELETTA, SIERRA NEVADA.

(Altitude 11,976 feet. Sketched in May.)

lofty areas over which they roam. Better still, my good friends in Spain to-day report that—"Nearly all the ranges are now protected by the owners, and even by syndicates ; so that there is no longer any danger of the ibex becoming exterminated." Further they add that, "within the last few years, the protection of

Game in the wilder regions of Spain has improved in marked degree."

In the **Sierra Morena**, particularly at El Risquillo, near Marmolejos, under the ægis of the Marqués del Merito (whose death, alas, has occurred ere these lines see the light), as well as in certain other resorts, the ibex, where protected, have responded with equally gratifying results; though nowhere, of course, on the grand scale above described.

Pyrenees.—Though ibex are extinct throughout the whole range, yet the region of the Valle de Ordesa, where big heads used to be obtained some thirty or forty years ago, has recently (through the Marqués de Villaviciosa de Asturias) been declared a Royal Reserve.

As regards other earlier Pyrenean haunts, Dr Cabrera writes that, in the Maladeta, ibex were already exterminated long before 1914; while in Monte Perdido (though eight or nine survived up to 1907), the last had perished before 1914.

Portugal.—In the Serra do Gerez, its last Lusitanian refuge, the same authority has been unable to hear of a single specimen being obtained since 1890—now thirty-seven years ago. In Portugal ibex are totally extinct.

Beyond all doubt, save for the magnanimous act above specified—(a *duty*, no doubt, yet a shining exemplar for all that)—the ibex of Grédos would long ago have shared the like fate.

AFTER FORTY YEARS.

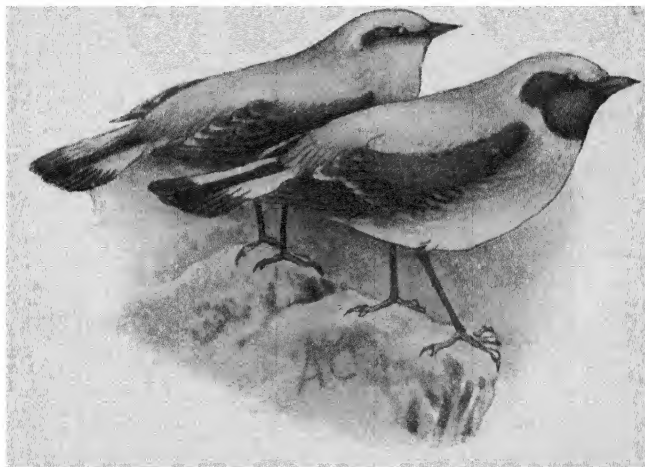
A Memory and a Contrast.

The story of our own initial expedition to the Sierra de Grédos has never been told, though incidentally mentioned in a footnote in *Wild Spain* (p. 141). Possibly the reason for reticence was some false sense of shame that the venture, in its main objective, proved a total and absolute blank.¹ In

¹ In simple fact, our first *three* expeditions after ibex in various parts of Spain were *all* blank—except for a single wretched female obtained on a Mediterranean sierra.

retrospect, that very reason to-day seems to furnish the best excuse for rescuing from oblivion a belated memory, just because it brings into vivid contrast the conditions that then prevailed as compared with the happier era that has since set in. Here is a brief epitome of the yarn:—

Our first camp was on the head-waters of the Tormes, a dashing trout-stream whose banks—and especially those of its tributary by which we commenced the ascent—were embowered



DESERT WHEATEARS.

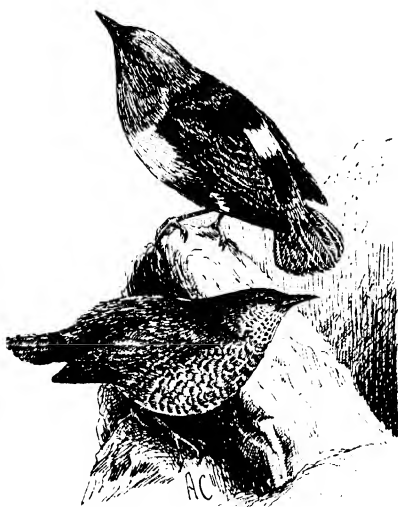
Black-Eared Wheatear (*Saxicola aurita*) and Black-Throated Wheatear (*S. stapanina*).

in dark stone-pines in which the giant Black Vulture (*Vultur monachus*, p. 106) nests, also our British song-thrush (*Turdus musicus*), and the titlark in the zone above, at about 5000 feet. We also saw squirrels in these pinales—the first of their kind we had noticed in Spain. The topmost pines were infested by some nocturnal insect whose raucous voices exceeded in volume anything we ever heard—hardly could bull-frogs compete!

Above timber-level the steep slopes of naked rock were sparsely clad with hardy plants such as esparto, pincushion-gorse, juniper, and similar spiny vegetation; as well as by the “piorno,” a semi-recumbent shrub with milky interior, said to be a favourite food of the ibex, and whose bleached limbs

in places resembled a crowd of human skeletons. This open zone was adorned with those lovely chats and wheatears that characterise the hill-regions of Spain; as well as by redstarts (both species), ring-ouzels, blue and rock-thrushes, tawny and alpine accentors.

But both bird-life and plant-life had well-nigh ceased to exist after passing the lower snows.



ROCK-THRUSH (*Monticola saxatilis*).

At a point beyond which not even sure-footed mules could further go, we separated; B. with Ramon soon disappearing up a snow-choked ravine to the right, while the writer with Lorenzo held westward towards a deeply serrated skyline that ever seemed to recede. Just ere we reached this 8000-foot rampart, there occurred that incident with the "blue-grey little beastie" mentioned in *Wild Spain*—its interest lying in the fact that no corresponding creature is known to exist in Spain, and it has subsequently been suggested that the stranger might even prove to be the sub-arctic Lemming (*Myodes lemmus*, so well known in Norway), since recent remains of that animal have, in 1895, been discovered in the mountains of Portugal.¹ That blue-grey beastie still awaits identification.

Crossing a skyline usually entails considerable precaution in big-game hunting. Here none was needed, since a curious winding pathway, or "*portilla*," pierced this one of the many dips in the extreme summit. This *portilla*, Lorenzo assured me, was a regular track of the ibex. Admittedly I had grave

¹ See *The Mammals of Western Europe* by Gerrit S. Miller, pp. 621, 623, published by the British Museum, Nat. Hist., 1912.

doubts till I found the *portilla* continued in a shallow couloir that ran down the opposite face, abrupt, and almost deep enough to walk erect in without stooping. It bore, moreover, certain indications of being used, and presently a patch of snow athwart its floor displayed the unmistakable testimony of hollowed hoofs. Down this *portilla* we continued for 200 yards on the reverse slope, and then Lorenzo indicated an abrupt rock-stack, closely impending it, as my post for the day. My good guide further pointed out that, a bare 100 yards distant, and almost perpendicularly below, a *second* "portilla" (or ibex-track) converged upon the one we had been following. Hardly had I taken all this in, than Lorenzo proceeded to explain that, within easy shot on my right, yet a *third* portilla ascended from the unseen abyss below. This last, he added (almost apologetically!), was largely concealed from our view by intervening rocks; but . . . "*there was a space of forty yards within which the ibex would be fully exposed.*" The exact limits of this open space he then indicated precisely: adding, moreover, that I need not fear being taken unawares, since—should any ibex elect to ascend by that track—I should already have seen them crossing a snowfield about two miles away.

Lorenzo then left me—he was going to "flank" another outlet a mile to the westward—but he left me marvelling at the precise and intimate knowledge—uncanny knowledge? that these wild mountaineers possessed of the innermost ways, of the most secret habits of their hircine neighbours. Their routine and routes—even their risks (measured to 40 yards!) all seemed mapped out in cynegetic minds. Could any wild-game withstand such deadly knowledge?—even though only availed with antediluvian single-barrelled firelocks? Possibly that was the most introspective "thought for the day."

My rock-pulpit, perched high amidst hanging crags, commanded a superb alpine panorama—one that no written words serve to describe. It included, as viewed from my aerial altitude, the whole of one of those gigantic *enclaves* which, in their entirety, form the *Circo de Grédos* . . . and my

spirits soared to corresponding altitudes—celestial altitudes. Surely with double ibex-tracks converging at my feet, a third within point-blank range on my right . . . with five-and-thirty wing-footed athletes encompassing whole leagues of awesome

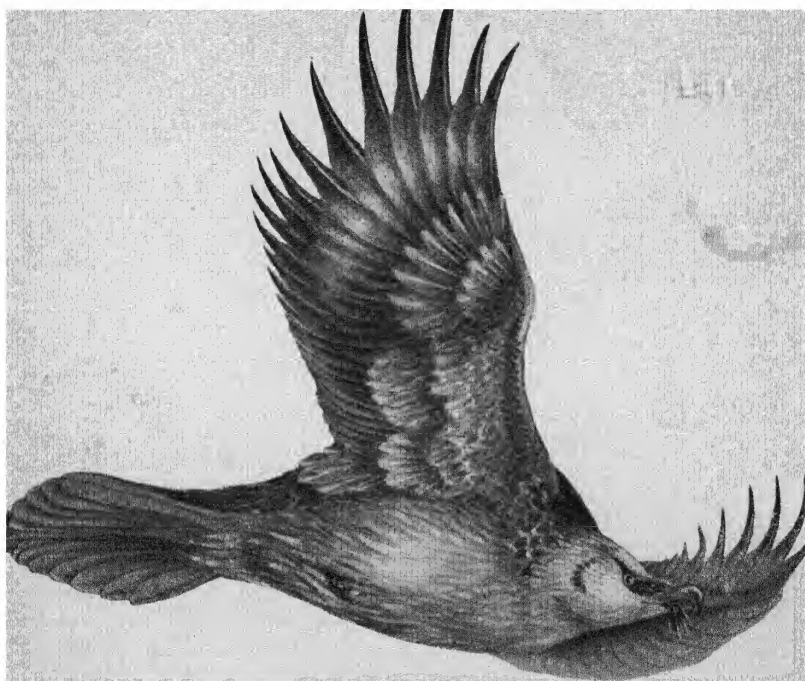


“GETTING UNDER WAY”—BLACK VULTURE (*Vultur cinereus*).

crag and scree, of snowfield and ice-glissade beyond—all actuated by the single impulse—to *persuade* the ibex in the way they should go—surely spirits might rightfully rise to the top of the scale? For a space one breathes an ambrosial atmosphere—dreamland.

Alas, when, four hours later, Lorenzo with a couple of his

flankers, came in, not a single living creature had crossed my horizon—nothing save alpine choughs, and at stated intervals, a great eerie lammergeier sailed by on rigid pinions—a superb spectacle. Nor had the “flying wing” any better report. Not a head of game had been seen by either party



“THE WAY OF AN EAGLE IN THE AIR” (*Lammergeier*).

in the whole wide *Ojéo*. The next day, and the next—each spent in a similar glorious enclave—repeated the story: but on the third, some of our drivers reported having seen a small band of ibex enclosed. Almost we wondered whether our friends, in purely amiable spirit, had designed a little fiction for our encouragement? Two days later, however, (our fifth), I did myself descry five ibex, one with long horns, slowly crossing a snowfield below my post. Presently they

vanished from view amidst geologic jumble of piled crags and chaotic rock-ruin that shut in my lower left-front. Still, they were clearly within the enclosed area: hence the quintette afforded one glorious half-hour's expectancy—at any moment they might flash into view. Never, alas, were they seen again; and since none had been viewed by the driving-line, we realised that our suspicions of two days earlier had been ungenerous.

So day succeeded day—each, in broad perspective, a replica of its predecessor. The mountain-settings varied of course—each (were it possible) more stupendous, more inspiring than the last. We spared no labour ourselves: our expert auxiliaries were past-masters of their craft. Yet never did we enjoy more than rare and fleeting visions of the game afar; nor, during fourteen strenuous days, was a single shot fired in all that famous Circo de Grédos where ibex now roam in hundreds. The contrast is clear.

The following passage occurs in the Diary of our first (and unsuccessful) expedition to the Sierra de Grédos. It was probably suppressed because, in these days, we were too proud to admit any such disqualification!

“These lish mountameers of the Plaza de Almanzór are not as normal human-kind. Rather they form a specialised development of our race—all muscles, thews, and sinews, supple as copper-wire, not an ounce of useless flesh to carry, and fitted with prehensile feet. To succeed as an ibex-stalker, a man must be compounded of steel and india-rubber—a combination of alpine climber (with rifle as handicap), steeplechase jockey and Gordon Cumming all rolled into one. Moreover, he should be under thirty, an athlete in hard training, and a sure rifle-shot, even though precariously balanced on a hanging crag.”

It remains to add that for their kindness in revising and correcting this chapter while yet in type-script, the Author's warmest thanks are due to their Excellencies, the Dukes of Medinaceli and Arión, the Marquéses of Villagonzalo and Villaviciosa de Asturias, and to Señor Don Camilo de Amézaga.



IBEX AT THE RISCOS DE VILLAREJO, SIERRA DE GRÉDOS.

(Photo by Sr. D. Camilo de Amézaga.)



GREAT BUSTARD, AT LA JEDULA,
JEREZ.



IBEX AT EL RISQUILLO,
SIERRA MORENA.

(Photos by Sr. D. José Pan Elberto.)

[To face p. 108.]

RISCOS DE VILLAREJO.

The permanence of the Spanish ibex in the great central Cordillera having thus been definitely assured, His Majesty the King (while maintaining the main strongholds exclusively in his own control) granted permission to some of those who had spontaneously ceded the sporting-rights, to obtain a few trophies on the outlying regions of the sierra.

With this object, in July 1919, three friends of my own (to one of whom I am indebted for this yarn) set out on a short expedition to the Riscos de Villarejo, a series of semi-detached precipices, terrible of aspect, that lie towards the eastern extremity of the range—let the sketch of the Riscos, reproduced from *Wild Spain*, speak for itself. Now one of the trio (who had not been there before), being inspired by that true venatic instinct which places *stalking* on an infinitely higher plane than *driving*, was all anxiety to test his own unaided skill in those stupendous Riscos. His companions, no wise loth, but quite conscious that the feat was beyond the power of any biped unendowed with wings, agreed; and the first day was devoted to this enterprise. The three reached the highest point accessible on foot. Here, not many minutes of inspection were needed to banish for ever the idea of ibex-stalking. A hollow-hoofed wild goat, or a lobe-footed gecko, might traverse mural precipices such as these—towering faces of naked rock, dark as Gehenna, only slightly inclined from the perpendicular, and without traces of foothold over their stupendous 7000-feet of altitude. Stalking was abandoned at sight and the once-despised drive arranged for the morrow.

Properly speaking, the operation in view was not a “drive” at all in the ordinary sense; but what is termed in Spanish an *Ojéo*, for not even the specialised goat-herds themselves can traverse rock-regions such as these. Their system is, by going round to windward of some mountain-mass, to gain whatever salient points may be accessible, and thence, by “giving voices” (and the *scent* likewise), to “move” such wild game as ibex

over miles of intervening crag, snowfield, and precipice towards the posted guns.

This morning the three guns were placed far apart on the hither brink of an abysmal gorge which wound away into higher regions above, but into the depths of which they could not see. Facing them across this gorge, there uprose that vast rock-wall that had dissipated the cherished ambitions of yesterday. Were ibex enclosed within the limits of the *Ojéo* then the game might first be expected to appear around the right shoulder of the huge *canchos corridos* (=running rocks) that now faced the guns; thence to pick a devious way downwards and finally to follow up the opposite brink of the intervening gorge. That is precisely what befell.

After some hours' expectancy, gun No. 1.—the lowest down—descried a vision of moving dots rounding the skyline a mile away and a couple of thousand feet above. Gradually those moving specks resolved themselves into a band of nine ibex, of which three were first-rate rams. After daintily descending that naked rock-face, all nine—as foretold—followed the line of the interposed ravine. The scheme worked according to plan. Already the Champion ram had twice been “covered” at 100 yards; but each time, ere trigger could be pressed, had vanished from view amid chaos of boulders big as village churches. . . . Then a second fine head appeared, stood for three seconds in an open gap, and the bullet took him fair. A “finisher” was put in and the stricken game slid down the slope, rolling over into the unseen depths of the abyss beneath. Ten minutes later another shot rang out away on the left, presently to be followed by a third still farther up the glen. Gun No. 2 had secured the Champion aforesaid (which also fell into the ravine); while the third ram had also fallen to the topmost rifle a mile farther away. Every bone in the two that had fallen into the abyss was smashed, but by special good fortune the beautiful horns had escaped intact.

Next day, with a superb trophy apiece, our friends returned to Madrid. The photograph at page 108 gives some slight idea of the abruptness of these Riscos de Villarejo.

CHAPTER VIII

THE PHILOSOPHY OF NATURE-STUDY

STRAY THOUGHTS ON THE CONDITIONS OF ANIMAL-LIFE, ITS INSTINCTS, AND INTER-RELATIONSHIPS.

“Thus is Instinct a most wonderful unequal faculty: in some instances so much above Reason, in other respects so much below it.”—GILBERT WHITE.

AMONG the varied joys that go to constitute what is generically known as “Natural History,” none has appealed to the Author more insistently than an endeavour to understand and to penetrate the inner mentality of the animal-world—its psychology in short:—that is, the cryptic instincts and specialised senses which govern the habits and motives of wild creatures and which regulate inter-relationships between themselves. It is a difficult study—doubly difficult. First, one encounters the intense diffidence of the subject itself—accentuated many-fold in the larger and wilder types, since these most resent human proximity. Secondly comes the uncertainty in gauging animal-perceptions by human standards, and in estimating the ever-varying degrees of difference between the two. Herein we have no guiding principle on which to rely. Conclusions can only be regarded rather as speculative than as proven fact. Our own perceptions by eye, ear, or other sense, together with the mental effects they suggest, are clear-cut enough. But it by no means follows that the same perceptions and intelligence would be conveyed to wild beast or bird. To them external objects or phenomena may appear in quite a different light—or colour. In short, their world and ours, both mental and physical, are possibly not the same. Forty years ago, Sir John Lubbock wrote: “The familiar world which surrounds us may appear a totally different place to other animals. To them it

may be full of music which we cannot hear ; of colour which we cannot see ; of sensations which we cannot conceive. To place stuffed birds and beasts in glass cases, to arrange insects in cabinets and dried plants in drawers, is merely the drudgery and the preliminary of study. To watch their habits, to understand their relations one to another, to study their instincts and intelligence, to ascertain their adaptations and their relations to the forces of Nature, to realise what the world appears to them—these constitute the true interests of Natural History, and may even give us the clue to senses and perceptions of which at present we have no conception" (*The Senses of Animals*, by Sir John Lubbock, Bart., M.P., F.R.S., 1888).

As a single example, I will take first the inexplicable disability in some of the keenest-sighted of what we call "big-game" to recognise a human being, though close at hand and in full view—provided he remains rigidly immobile. All our great African hunters have observed this phenomenon. Selous relates striking instances, of which I will cite two. Once when resting on a rock, quite openly and on the crest of a ridge, a waterbuck bull walked past him *within three yards* without the slightest suspicion of his being there at all. The second instance is even more interesting, because—being with a wounded lion—it incidentally reveals the coolness of the man. After firing the shot, Selous remained sitting in full view on the slope of an ant-hill, an empty rifle in hand, while the enraged beast was searching for its aggressor close in front. Realising that rigid immobility was the correct policy, S.—though he held a cartridge between finger and thumb—remained statuesque. Even so slight an action as slipping that cartridge into the breech would assuredly have been detected and brought the lion straight upon him. . . . So he waited. When the lion momentarily turned its head, Selous' opportunity arrived (*African Nature Notes*, p. 309).

Several similar instances have occurred to myself—one with a wart-hog, another with a waterbuck are recorded in *Savage Sudan*. Neither of these animals detected the presence of two human beings, myself and my Arab gun-bearer, Baraka. though

quite in the open and, in each case, within 40 yards. My Diary reads: "Our impersonation of two dead stumps may have been very artistic; but that I do not regard as the real explanation."

Striking experiences of the kind have also been recorded by Major Stevenson-Hamilton. He inclines to attribute the cause to the lower brain-power of these animals being unable to translate into realism a picture clearly visualised by their eyes. That explanation is corroborated by the fact that the Primates



WART-HOG. White Nile, January 26, 1914.

—such as baboons—being gifted with a higher intellectuality, are not liable to fall into such error.

Dozens of similar instances might be mentioned—all, as a rule, misinterpreted and often vaguely ascribed to those *blessed words*, "colour-protection." As a refreshing alternative, may I suggest "the Glacial Epoch"? At any rate that geologic phenomenon used, within my recollection, to be regarded as a convenient *causa causans* of most things that couldn't be explained off-hand.

As a second wide-spread misapprehension regarding wild-life, the Lion affords an instructive example. The current

idea of "a roaring lion walking about, seeking whom he may devour" rests, it is true, on Scriptural Authority; yet forms at best but one of those dangerous syllogisms, a half-truth. Even the Psalmist, however, may well be forgiven one rare slip in his Zoology, seeing that his successors down the ages have perpetuated the error. The lion undoubtedly does "seek whom he may devour"—that is his allotted function in life. But the *rôle* applies exclusively to less than *one-half* of his time—to the hours of darkness only. By day the lion, with other big carnivoræ, cease to be beasts-of-prey at all—neither do they roar. Being strictly nocturnal, the lion lies up—sleeping-off his overnight gorge, and hidden in densest thicket—during the whole twelve hours of tropical sunlight. During those hours he is never seen, unless disturbed by man, by forest-fires, or other extraneous cause. So seldom does a lion ever appear in the open by day that he then passes unrecognised and unfared by his habitual victims. "On the rare occasions"—(I quote from my *Savage Sudan*, p. 414)—"when herds of zebra or antelope do chance—perhaps once in their lifetimes—to set eyes on a disturbed lion astir in daylight, no sign of alarm do they evince; no panic seizes them; nor, so far as we can judge, do they recognise in the unwonted apparition (however near) an enemy at all. Some watch with curious eyes, others calmly continue grazing." Though next-door neighbours, the zebra doesn't know the lion by sight—hasn't even a nodding acquaintance. When the two *do* meet, it is in the dark and in the embrace of death. This, of course, assumes that the wind is right. The moment that game, hitherto unsuspecting, come under the lion's lee, the stampede is instantaneous. So well, in fact, do they recognise his smell—though not his person—that antelopes instinctively avoid grazing for miles to leeward of a sleeping lion. On several occasions during my seven African hunting-expeditions, it has been my good fortune to eye-witness these illuminative scenes, details of which are set forth in the work above cited (*cf.* pp. 67, 104, 113, 114-5), as well as in my *On Safari in British East Africa*, pp. 124-5. I cannot call to mind the trait

being mentioned by any other African hunter; though that may merely be due to a failure of memory.

The above paragraph tells the normal life-habit of the lion; but there occur exceptional cases when, under the stimulus of hunger, or perhaps of opportunity, he deliberately shows up in broad daylight. No such instance has come under my own observation; but quite early one afternoon, while my friends Messrs A. L. Butler and Gilbert Blaine were trekking through the Eastern Sudan, three lions attacked their donkey-convoy and had actually killed one donkey ere Blaine could come to the rescue. He then shot two of the lions and wounded the third. Such cases, however, are exceptional. The lion is nocturnal, and when on rare occasion he and his habitual prey chance to meet in daylight, neither recognises the other. The lion strolls past unconcerned: the only visible trait in the others is that of curiosity at an unknown apparition.

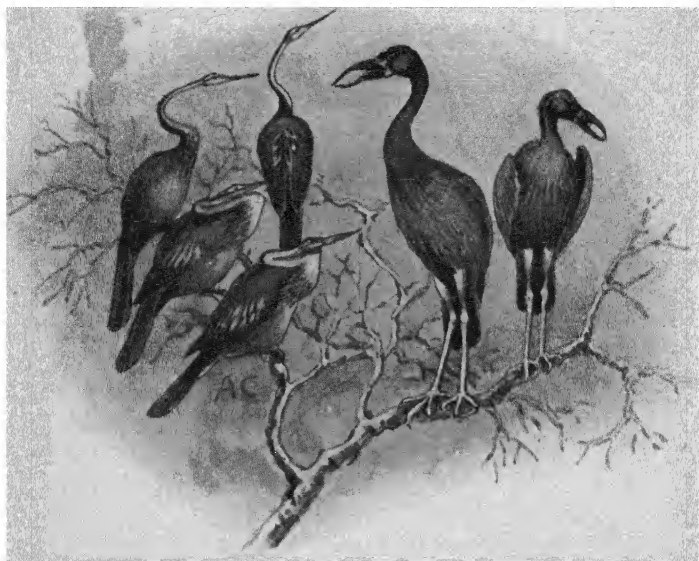
However fascinating the subject may be, yet this study of the general conditions of Life in the animal-world, with its differentiated senses or instincts, and the inter-relationships between wild creatures, is altogether too spacious for consideration within the limits of a chapter or two—a volume would be needed. Already many other instances have been treated *passim* and incidentally in my previous books¹: here boundaries must be narrowed and defined. Hence the rest of our space shall be devoted to a consideration of but one other aspect, to wit:—

THE THEORY—OR FANTASY—OF “COLOUR-PROTECTION.”

Pride of Place has certainly not been accorded under any illusion that the subject will prove popular. On the contrary, my somewhat drastic treatment of it rather runs counter to

¹ The comparative values of the Primary Senses in Man and in the Lower Creation respectively—as well as the question whether the quintette customarily assigned to each, is correct in either or both cases—are discussed in *The Borders and Beyond*, chap. xxx. May I further draw the special attention of naturalists of the younger generation to the remarks on “Modern Zoology,” in chapters xxxii. and xxxiii. of the work cited.

current impression. There is shrewdness in the question put me by a lady: "Why demolish a picturesque legend?" But picturesque legends and pretty Fairy Tales arrayed in attractive guise and dazzle-painting—seductive formulæ that please the eye but mislead the mind—have no proper place save in Jungle-books and the like, where they are recognised as sublime flights of Fancy, and so do no harm. Modern systems



WEIRD BIRD-TYPES ON WHITE NILE. DARTERS AND OPEN-BILLS.

in zoology, however, tend more and more to neglect the factor of THE LIFE and to confine themselves to minute, even microscopic examination of structure, adaptations of form, and similar investigations, well-nigh to the exclusion of the living subject with the conditions of its life. Such researches are, of course, necessary and essential. Still they form, in themselves alone, merely the skeleton—they are the spade-work and the drudgery of zoological science, strictly complementary to the life-study, but unsatisfying without it. Conclusions based upon the one without the other remain, so to speak, *in the air*—

unproven, or at least suspect, till they come to rest on the firmer basis of the twin studies combined. The dual sections are, in fact, but component halves of a single integral whole: nor can final truth ever be assured without their absolute co-ordination and co-operation. No one—not even the most accomplished—who lacks personal acquaintance with wild creatures in life, can be regarded as enjoying the full confidence of Nature.

Let me not appear to depreciate meticulous research. In certain exact sciences, the microscope ranks as of primary importance. In zoology likewise, it has its specific uses—lesser in degree, but essential where appropriately applied. It works, nevertheless, under the shadow of a great temptation—that, in the zeal for minutiae, there be lost to view the broader perspectives. It risks a failure to envisage primeval forests while busy counting leaves. Trivialities whet no appetites.

Beyond all doubt, the above represents the popular aspect of science. Hence the more judicious majority of naturalists (being neither heroic nor good Samaritans) prefer to pass by on the other side, for—so Nugent tells us—'tis—

“*Safer* with multitudes to stray
Than tread alone a fairer way;
To mingle with the erring throng
Than boldly speak ten millions wrong.”

In more forceful, if less poetic language, Dean Inge expresses the same idea thus: “To float with the stream is a feat that any dead dog can accomplish.” There is, after all, nothing new in these sentiments. They have persisted since, 2400 years ago, Socrates declared that he would rather “Err with Plato” than be in the right with the Tapers and Tadpoles of his day. Nature, alas, has always been chary of repeating the Socratic type.

With all deference due to Demos—and some measure thereof shall not be denied him—I submit that the considered opinion of even *one* qualified man who has thoroughly investigated a subject, may possess a potentially higher value

than those of a hundred, or a thousand, who have merely taken a platonic interest: or of Nugent's "ten millions" who have taken none at all, yet are oft prone to express loud-voiced views. A worthier course—not merely applicable to this one minor topic, but of general cogency—is outlined in Dr Hornaday's warning: "Beware of seeing too much and



STILTS IN THE SPANISH MARISMA.

of scientific hallucinations. It is better to see nothing than to see things that are not true."¹ Yes, a word of truth transcends ten thousand of persiflage, however sparkling.

So much by way of prologue—now to consider the Doctrine of Colour-Protection. The theory is based upon the supposition, or superstition, that the Almighty had so camouflaged His creatures as to render the harmless invisible

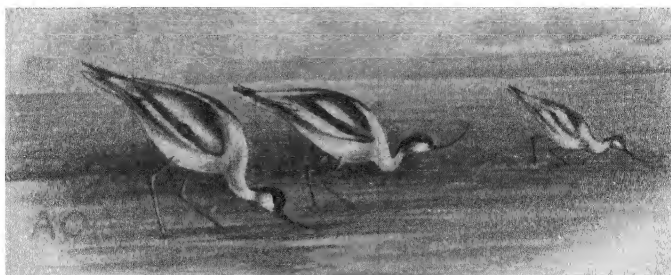
¹ *The Minds and Manners of Wild Animals*, by Dr T. W. Hornaday of New York, p. 152 (London: Scribner's Sons).

to their enemies: while the enemies themselves were equally aided in their predatory avocation by an "obliterative coloration." The idea in itself is pretty and lends grounds for the erection of "fascinating theories," albeit those grounds amount to infinitely less than a half-truth—rather they may be likened to those deceptive films that overlies a dangerous morass. The Will o' the Wisp, nevertheless, attracted perfervid imaginations and proved "intriguing" to popular preconceptions. Then, when a School of Savants of high *intelligensia* (but without field-experience) blessed it with their benediction—at once a multitude of ready-writers of brilliant pen perceived that its exploitation promised an almost inexhaustible source of inspiration . . . and more concrete advantages. Against omnipotent influences such as these what boots it that a mere handful of field-naturalists should dare to dispute its tenets?

Personally, I did so from the start. So far back as 1892, in *Wild Spain* (pp. 112-115), several specific fallacies are pointed out in terms that defied contradiction:¹ while, after thirty years' further study of the subject, in *Savage Sudan* (1921) the Thesis as a whole is denounced as virtually a mere simulacrum, unreal as a Mirage in the Desert. The Mirage, by my diagnosis, is in the nature of a hybrid begotten by confusion of thought between two separate entities, a Principle and a fugitive idea. The Principle is that of Assimilation to Environment: the fugitive idea confuses that Principle of Nature with Protection, though none is necessarily connoted.

¹ Looking back in retrospect, there must have been a considerable degree of risk for a young writer directly to confute a generally accepted belief. It has, however, been my lot on various occasions—in common with other specialists (say, great poets, punt-gunners, poachers, pirates, or archbishops)—to belong to a minute minority. Since those far-away days, however, most effective Allies have appeared on the Stricken Field. I no longer stand alone; for the whole basis and validity of the Fetish of colour-protection has been directly challenged by men of World-Authority, and of field-experience that cannot be questioned—in particular by F. C. Selous, by President Roosevelt, Arthur Neumann, and C. H. Stigand, all, alas, passed away: besides others still with us.

Now the "Influence of Environment" is a clean-cut Principle in Nature, widely operative though not universal—several instances are annexed: nor is it altogether an unreasonable assumption that when the colour of an animal systematically approximates to that of its surroundings, at least some degree of "Protection" may thereby be afforded. It would be unwise to deny unreservedly that such may not occasionally occur: but those cases can never be other than exceptional and confined to the lower and less active forms of life. Bear in mind, moreover, that under every circumstance "Protection" would still be

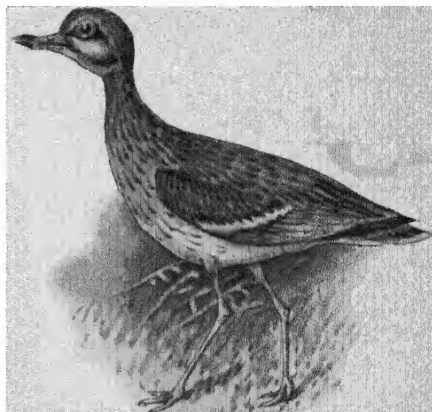


AVOCETS ON THE GUADALQUIVÍR.

dependent on rigid immobility. Nothing that moves—even in a part—is protected, be its colour never so histrionic. Immobility, in short, is the Alpha and the Omega of this question. Movement is the Soul of Life; Immobility the Similitude of Death.

So far we still remain on common ground. None of the protagonists of colour-protection have disputed the facts just mentioned: rather, they either admit them or take them for granted. Yet, with singular blindness, they fail to perceive that the admission virtually gives their Theory away, since it leaves them nothing to "protect." Oh, yes! there remain lots of purely immobile things—limpets and the like. Limpets however, and all that ilk have no place in chapters mainly concerned with creatures of active life and habits.

No better illustration of the divergence between practical and academic lines of thought can be adduced than those unfortunate show-cases originally introduced at the British Museum (Nat. Hist.) purporting to exhibit the working of this "Principle" of colour-protection.¹ That of arctic foxes and white stoats hunting white hares and white grouse by daylight was a travesty of Wild Nature, inasmuch as it ignored the fact that an arctic winter has no daylight. That grotesque incongruity has, however, been so clearly exposed by Selous that further words are unnecessary.² The second show-case, exhibiting the Desert creatures is almost equally misleading. All these, bird, beast, and reptile alike, it is true, conform in colour so exquisitely with their Desert environment — actually sandier than the sands of Sahara (that is, as exhibited in the statuesque solemnity of South Kensington) — as well-nigh to deceive the very elect. But ere he surrender



STONE-POLOVER. Foot-prints rectilineal.

his judgment to the Syrens of science, let our student visit the Sahara for himself. There he will see these identical creatures in the life: but assuredly will never find them thus—statuesque and immobile, mere effigies in a glass case, but revelling in that freedom of ceaseless movement and activity that is the portion of all creation—bar limpets—and which in itself alone bewrays all idea of protection by colour. Hardly a diurnal creature of

¹ Whether they still remain there or not I do not know, not having visited the museum for some few years.

² Selous' actual criticism runs: "It conveys an entirely false view of the Struggle for Life as carried on in the Arctic Regions." I would beg all interested in the subject to read in full the two opening chapters of his *African Nature Notes*; as well as the chapter on "Mimicry" in Dr Drummond's *Tropical Africa*.

active nature can long remain immobile. The incessant vigilance demanded by self-protection, and equally by the quest of their daily bread, preclude a sedentary existence. With the larger animals, an ear must deflect to interpret each suspect sound : a tail swish whenever a clegg alights on its flank : and with movement vanishes all sense of colour-protection. Admirably as, in this case, drab and pallid liveries, assimilate in tone with the sandy wastes around, neither beast nor bird ever attempts to exploit the fact, or themselves to perceive any protective quality in it.

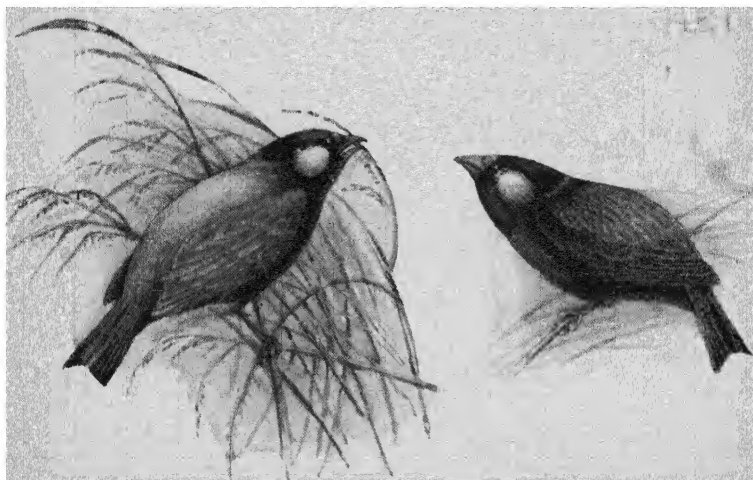
Thrice has it been my good fortune to study these wondrous scenes in the Deserts of Northern Sudan—scenes which spell out in plainest words the unbridged gap between wild-life and academic theory. They reveal, moreover, how easy it is for the latter to fall into error : since Nature verily seems to set traps and to dig pitfalls for the credulous and for the unwary. Yet all the time, her book lies open for those who will to read : its pages lead straight ahead, an infallible guide. If one may paraphrase the Poet, and for “Homer” read *Nature* :—

“Read Nature once, and you need read no more,
For all books else appear so mean, so poor :
Verse will seem prose ; but still persist to read,
And Nature will be all the books you need.”

—SHEFFIELD (Duke of Buckingham).

To study these “colour-protected” creatures in their own haunts is to learn a lesson that can neither be forgotten nor overlooked—impostures, mimetic frauds, every one of them, camouflaged with all the subtle artistry of Nature’s brush and cunning deceit. So long as stationary, they remain virtually invisible to human eye ; yet never for a moment protected against their own ceaseless activities. One’s self-esteem may suffer a shock when some scrap of yellow Sahara, close by, suddenly resolves its unseen self into a darting sand-lizard, a foot in length and in furious pursuit of some passing insect : or when a whole company of sand-larks (*Ammomanes*) spring underfoot from where a moment before had been naught but naked sand. Colourless creatures, both of these ;—not the most skilled brush can depict a negative ; but that lizard’s

back, if closely examined, IS thinly adorned with tiny linear stripes and specks, reproducing in subtlest counterfeit the few salient features of wind-rippled sand. Many analogous cases one sees in the Desert: but I will only specify *one*. The Desert-larks (*Pyrrhulauda*)—(though their cousins of the richer cornlands are arrayed in warm browns and chestnuts)—are here clad in merely milky apologies for colour, monochromes, faded and washed-out in consonance with Saharan surroundings.



FINCH-LARKS (*Pyrrhulauda*).

"Cinderella of the desert."

"The proud beauty of the corn-lands."

Colour-*patterns* these Cinderellas of the Desert still retain, faintly distinguishable; but every vestige of a positive hue has vanished—save only the dark underside, and that is concealed, so long as they lie prone on the sand. Almost such masterpieces in assimilative Art deceive. They are a triumph of Nature's handicraft; but they do not protect (Cf. *Savage Sudan*, pp. 433-434).

These Ethiopian Deserts, though in themselves Abominations of Desolation, have thrice attracted me, partly by the fascination of their faunal problems, but largely owing to the marked individual diversity of their physical features, no two (though

adjacent) being necessarily alike. These experiences, however, having already been described, I will confine myself to an extract from my Sudan diary at Erkowit:—

“Throughout these sandy and rocky Deserts of Northern Sudan, one notices, region by region, corresponding changes in the depth of monotone colours, darker or paler, prevalent in bird and beast. Thus in the tawny deserts beyond Omdurman both *Certhilaudas* and *Pyrrhulaudas* are markedly paler than on this darker plateau of Erkowit: while an intermediate phase (of slightly different ground-



“PROTECTION THAT FAILS TO PROTECT.”

colour) occupies the Red Sea littoral. Another eloquent example of graduated adaptation to altering environment is afforded by the sandy-hued *Ammommanes*; and hardly less so by the Desert-babbler (*Argya*), both of which are found alike on sandy and on rocky deserts, and in each locality exquisitely corresponding with their immediate surroundings.”

There you have, illustrated, Nature's Principle of Assimilation to Environment perfected without involving any degree of protection whatever; though by confusion of thought, the two have been falsely associated.¹

¹ It is pertinent to add that most of the minor Desert mammals, such, as jerbilles, jerboas, fennec, etc., though exquisitely “protected” so far as colour goes, are strictly nocturnal, never seen by day—and by night colour counts not. Among the Desert beetles, too, some are black and these alone are diurnal. The sand-coloured beetles bewray all scientific rules (in this regard) by spending the day below ground!

It may be merely coincidence, but it certainly seems noteworthy that our travellers afar—our big-game hunters and field-naturalists, who have studied this subject at first-hand in those wider spaces where Nature still reigns supreme—that all these should well-nigh unanimously reject this Theory of colour-protection as untenable. One may wonder—were it possible for its academic protagonists to spend a few years (even a few weeks) in the unspoilt wilderness—would they, too, return converted and convinced? My personal conviction is that that would be only *one* of many happy results.

It gratifies that almost complete corroboration of my views on the Desert fauna has recently been afforded by the cognate experiences of Dr P. A. Buxton, during several years spent in Mesopotamia, Iraq, and Western Persia, as well as in Algeria. In his admirable work *Animal Life in Deserts* (Arnold), Buxton reaches conclusions almost identical with those set out in *Savage Sudan*—indeed the chief difference between us is that, with becoming modesty, that learned Author occasionally shrinks from the ultimate decision to which his stated facts clearly point. It is undoubtedly a charming characteristic of Science that She is wont to enwrap her fair form in a mantle of modesty and mystery; while the present writer must belong to the less æsthetic sex which cares less for charm, more for results. Having, after years of research, discovered a clear brace of two's, tested to be not only correct but mutually superimposable, he does not hesitate to state the quotient as four. Dr Buxton nevertheless clenches the point with precision when he writes: "No progress is possible till we rid ourselves of the belief in Protective Coloration." *Animal-Life in Deserts* is alike delightful and instructive. It exemplifies Roosevelt's dictum: "No amount of ingenious closet-guessing can take the place of trained first-hand field-observation undertaken, not to twist facts into the support of a Theory, but with the ability and the purpose to find out the Truth" (*African Game-Trails*, vol. i., p. 78).

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A crucial test in this gallery lies in the question: Against what enemy is this creature or that presumed to require protection by colour? To assume that any creature needs such protection when it has *no* enemies seems rather like looking for trouble? Take the oryx as an example. In South and Central Africa where the southern species, *Oryx gazella*, ranges over regions where lions abound (and habitually prey upon it), the oryx is very conspicuously coloured. Yet in the waterless Deserts of Sahara, where no lions exist, and where therefore the oryx (*leucoryx*) has no enemies at all, these striking colour-contrasts have been entirely eliminated and the animal reduced to a colourless monochrome assimilated to its Desert environment, though in no sense "protective"—witness Mr Riddell's speaking drawing of this and the other Desert-hued denizens of the Sahara adjoining. Bear in mind, moreover, that the intermediate form of Oryx—*Oryx beisa* of Equatoria (see sketch at p. 94)—conforms in colour-pattern precisely in accord with its geographical position in Africa, and absolutely regardless of any "protection" which—by theory—it would certainly require from the lions which abound alongside it. Note also, incidentally, how the glossy, mahogany-hued coat of the korrigum hartebeest, shown therein, contrasts with the pallid washed-out colours of all the other Desert creatures. By no stretch of imagination can the korrigum be described as "colour-protected," since on the featureless monotony of the Desert he stands out black and conspicuous as a chimney-sweep!

[Here I would pause to draw special attention to certain specific features in that picture opposite. Of the lovely desert-hued gazelles in right foreground, Mr A. L. Butler, with sixteen years' experience in the Sudan, wrote me: "Addra are the most extraordinarily conspicuous things I've ever seen wild—and they know it. A herd of them is just as conspicuous as a line of white linen clothes hung out to dry. *Oryx leucoryx* nearly as conspicuous, though not quite so. . . . Moving or motionless, an addra is a *white flag*" (*Savage Sudan*, p. 420). To their desert congener, the isabelline gazelle, a similar remark applies, if in slightly less degree: as has been corroborated by another Author whose many brilliant gifts include—(possibly not the least important?)—that of

The Eye which Sees . . . even gazelles! Of the eve of the Battle of the Atbara, Mr Winston Churchill wrote: "The sun was setting, and the red glow, brightening the sandy hillocks, made the western horizon indefinite. . . . A few gazelle, intercepted on their way to water, trotted slowly away in the distance—white spots on the rosy-brown of the sand" (*The River War*, p. 231). Similar testimony has already been borne with humbler and more halting pen by the present Author: who also, in the barren hills far beyond Atbara, found the larger Ariel gazelle as conspicuous at three miles as a flock of sheep on a Northumbrian moor.

In the same picture, the mahogany-hued korrigum—in striking colour-contrast both with desert-congeners and environment alike—is apt to cause heart-pangs to our good theorists? Surely it is but an invertebrate sort of "theory" that can only subsist on foreign soils—where no test is available—and which vanishes in thin air, as mist-wreaths dissolve at sunrise, so soon as a competent observer goes out *to see for himself*.

Another salient point emerges, though it is here irrelevant. None of the great upstanding antelopes depicted can ever revel in a "long drink" of pure water from birth till death. That aspect, however, is elaborated in a subsequent chapter on *Thirst*, p. 142.]

CAMOUFLAGE AT SEA.

During two long voyages immediately after the War, and while our ocean-steamers still retained the fantastic "dazzle-painting" which, we had been told, was "obliterative," it came as a surprise to observe how little effect—if any at all—this system of camouflage had to ordinary eye—that is, as seen from the deck of a big steamer—as seen through a periscope I had no experience. Great steamers we saw daily, and at all distances: but their weird colour-patterns made no perceptible difference. Masts, funnels, superstructure, smoke, were all as clearly visible as ever; the camouflaged hulls no more obliterated than those of a black P. & O., a grey South-African, or a green Wilson Liner. We could see the course each ship was steering and judge approximately her speed. We were told the camouflage puzzled gun-layers when a ship was zigzagging. Possibly the zigzag was as much the cause as the camouflage?

From a statement issued by the Admiralty (13th January 1918) I learnt, with some amazement, that the system of "Camouflage" (then discredited and discarded) had been based, in the first instance, upon "Thayer's Law." Now I had never previously heard of such a "Law," though I had read (partly) an American book on *Concealing Coloration*, by Mr Gerald H. Thayer, without realising that its superheated theories constituted a "Law." So far from that, my own view precisely coincided with an authoritative review in another American publication—no less than *The Auk*—which thus described it:—

"By skilful jugglings we are shown how anything and everything may be rendered inconspicuous, usually by artificial means or under artificial conditions. . . . This method of persuasion, while it appeals to the public, is--there is no other word--simply charlatantry, however unwitting."

Beyond the Atlantic, this fallacy of camouflage and of "obliterative coloration" was assessed at its true value—"charlatantry." On our side, apparently, the lives of gallant seamen and the safety of our merchant-navy were risked on a chimæra. Admittedly, some of Mr Thayer's paintings give truly marvellous colour-effects; though the scheme of one in particular—flamingoes at sunset—would appear to involve a reconstruction of the Solar System. But that is a trifle to a full-blooded Theorist.

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"Go, wondrous Creature ! Mount where Science guides,
Go, measure earth, weigh air, and state the tides ;
Instruct the Planets in what orbs to run,
Correct old Time and regulate the sun ;
Go soar with Plato to the Empyrean Sphere,
To the first good, first perfect, and first fair ;
Or tread the mazy round his followers trod,
And quitting sense call imitating God."

—POPE.

CHAPTER IX

THE PHILOSOPHY OF NATURE-STUDY—*continued*

“COLOUR-PROTECTION.”

IN the first instance—so my memory serves—the discussion on colour-protection had largely centred around the big-game (both the predatory and their prey), the wildfowl, and objects of chase in general; together with such other creatures—beast, bird, fish, reptile, or insect—as had come under our personal observation in the life: nor were prehistoric conditions, or subsequent changes taken into consideration. In a sense, we assumed that no further evidence was necessary. Perhaps the restriction of attention to creatures personally known, though in my case extending over three continents, unduly narrowed the field-of-view: for, while yet busy with this chapter, Mr W. P. Pycraft has sent me his *Camouflage in Nature*, a work which sets forth in reasoned and lucid terms the case for the orthodox Colour-Protectionists. My old friend enumerates many strange forms of life, summoned from the uttermost parts of this earth and from its seven seas—weird denizens of tropic forest and ocean cave—most of which are strangers to me—some hardly heard of save in book or museum. Force of circumstance, nevertheless—and equally of habit and of space—compel me to exclude all total strangers from my own brief survey. I must confine myself to the original question—the far simpler question—are the animals we know in life, or any of them, “colour-protected”? My answer is a direct negative, and for that faith—or lack of faith—will proceed to give concrete reasons.

To begin with the big carnivoræ—lions, tigers, leopards. We are asked to believe that their respective colorations (stripes, spots, or the absence of either) are specially and equally designed by Nature to enable these animals to

advance, unseen, upon their prey. That, in my view, is a total misapprehension, based on quite a number of failures properly to appreciate the true conditions of wild-life in tropical jungle, and alike of the science of hunting-craft as practised in the lower Creation.

The vertical stripes of the tiger are poetically assumed to correspond with the vertical shadows among reed-beds which, it is also assumed, form its normal home—two assumptions. The lion, by analogy, requires no such “protection” because he does not live among vertical shadows. But does any such marked difference in jungle-vegetation exist as between India and Africa? Unless that difference exists (which is not the case), the whole pretty theory hangs suspended in the air. Within my own experience, one of the *most* favoured haunts of the lion in Africa is among precisely such reed-beds as those, where vertical stripes would—theoretically—assist him in the struggle for existence. The lion boasts no stripes, yet flourishes equally in a monochrome coat; nor are stripes of the slightest practical assistance to the tiger—nor spots to the leopard. For remember that both animals are wont to lie up all day in dark lairs in the depths of the undergrowth, where scarce a glint of sunlight penetrates even at noontide—where no light exists save the electric flash of feline eyes. Neither of these raptors is “on view” during the hours of daylight, and by night colours and colour-patterns count not.

Turning next to the leopard—his brilliantly spangled coat is ascribed (again poetically) to his haunts being arboreal, and because the dappled spots correspond with glints of sunlight playing through massed foliage above. True, the leopard is slightly arboreal—very slightly indeed, in my experience, though essentially nocturnal; but even if the poetic ascription were relevant, the assimilated pelt would only be exposed to the view of creatures still higher up the tree—say to monkeys: while, to all below, the “countershading” would be conspicuous. I deny the poetic aspect in each of the three cases as inconsistent with the commonplace facts of Nature.

The cheetah is also spotted: yet is never arboreal,

Moreover, he pursues his prey in broad daylight, and by sight and speed alone.¹ Many analogous cases could be assembled — there are, for example, the lynxes: some are



SPANISH LYNX (*Lynx pardellus*)—from specimen at Housty.

The bushy whiskers and beard in an old male stand out like a halo around the face.

“What modes of sight betwixt the wide extreme,
The mole’s dim curtain and the lynx’s beam.”—POPE.

plain, others spotted, though their avocations are identical. In Spain we have the genet—pale pearly grey, but with bold

¹ Scent will at times almost certainly enable the cheetah to *find* his quarry in the first instance; since, despite length of limb, his low stature, with eyes only two feet from the ground, gives him a very restricted horizon.

black blotches on its body, bars on its tail ; whereas its equally predatory neighbour, the mongoose, is whole-coloured throughout—clad in a pepper-and-salt monochrome. A thousand such instances might be cited. Hardly a creature in the Realm of Wild Nature but cries out against being forced to fit into some hypothetical niche. Nature, in short, resents being dragooned into pretty poetic schedules and watertight compartments that look so imposing in print. "*Nimum ne crede colori*" is the maxim of every self-respecting wild creature of active life and habit.

Here may appropriately be interpolated a remark on the various coloured plates by Mr Riddell which adorn this work, since several of them (though bearing directly upon our present subject) are not precisely co-related with the text—some, rather, illustrate scenes and episodes described a few years earlier in SAVAGE SUDAN and my other works. Specially would I refer to that facing p. 94, representing mixed Game on the plains of the Rift Valley in Kenya Colony—one of the wondrous everyday spectacles familiar both to the artist and the author. Within a single glance, the eye may catch herds of brindled gnu—which are blue ; hartebeests which are red, or impala redder still ; zebras in black and white, or gazelles in varied shades of fawn—colours, moreover, which alter from moment to moment in accordance with light and shade and with every variation in the angle and the impact of light. Sometimes a lofty giraffe may be included in the eye-scape, or a troop of oryx, as shown at p. 145 ; a black buffalo, or even a prehistoric rhinoceros. The latter may appear in any colour, from dull black to snow-white—or red ! according to the hue of the mud in his latest wallow. But whoever studies these plates and can afterwards swallow the theory of a universal "Colour-protection," must surely rival in assimilative powers the fabled ostrich, which breakfasts on two-foot iron tent-pegs and opened sardine-tins—with nice jagged edges!—and enjoys as a second course a few coils of barbed wire? Similar remarks would apply to the plate of the Desert antelopes of Kordofan at p. 126 ; also to the great bustards on Spanish prairie at p. 294, and several more—including specially the striking drawings of wild-life on

White Nile, showing groups of elephants and hippos, the exquisite Nile lechwi (*Onotragus megaceros*) and harnessed bush-buck, and the hordes of basking crocodiles surrounded by an amazing variety of bird-life—these three at pp. 116, 128, 210, besides several others *passim*. Should any poetic theorist still contend that any, or all of these animals—whether on paper or in Nature—“blend with the landscape,” or “sink into their surroundings,” he may (charitably and most respectfully) be recommended to consult an oculist.

But, after all, it is not to their colour but to their perfected mastery of all the Arts and the Science of hunting-craft that these nocturnal beasts-of-prey owe their well-being and their survival. Colour counts not at night—one can't rub that in too often. Having all my life been a hunter, both at home and far overseas—stalking, still-hunting, spooring, punt-gunning both by day and by night, besides (not least) my half-century's hunting-over-dogs on our Border moors—I claim an almost personal community of thought with the other predatory creatures—am half a raptor myself! Bear in mind (what is too often forgotten) that there still survives—and probably always will—a minority of our Race within whom elemental Man yet predominates; a select few to whom the charm of the lonely wild, the spell and the solitude of the unspoilt wilderness, together with the joys and the risks of the chase, appeal beyond those more artificial excitements, the “thrills,” the “stunts” and crowded moments that (we read—probably quite wrongly!) fill the cup of the more gregarious and city-loving majority—*Sua trahit quemque voluptas*. Neither need envy the lot of the other, since the two are cast, as a rule, in separate moulds that will not coalesce—though occasions exist when they might possibly co-operate. Meanwhile, on technical topics such as this, the latter-day Esau, though clad in pelts, may yet “leave standing” the Learned and Erudite—not necessarily arrayed in purple and fine linen! Esau, moreover, drew his inspiration from the dear school of experience, and from the Rigour of the Game.

As one of the barbaric minority aforesaid—though better equipped than Esau, whose reliance was solely on “his quiver and his bow” (Genesis, xxvii. 3)—a crucial point in this gallery has always struck me as inexplicable. I refer to the apparent inability in the purely scientific mind to realise the everyday Principles of Hunting-craft, or the elementary conditions of Wild-Life and the struggle for existence as it persists night after night in tropical forest or jungle. Not even do our theorists attempt to visualise the clean-cut distinction between (1) hunting by scent, and (2) hunting by sight. All nocturnals hunt by scent only. Sight has little or no bearing till the climax—that final rush at close quarters, when the chase passes “from scent to view.” Till that moment “Colour” has no bearing.

To make this vital distinction clear and yet avoid all risk of wounding even the most tender susceptibilities, is no simple task. Breakers rage straight ahead: Scylla threatens to port; Charybdis on the starboard; nor are there any Sirens to advise—or deceive! Should I have failed to find a middle passage, I can only regret—deeply regret: but by culling *quite impersonally* the following few selected passages from the writings of some of our most distinguished zoologists, surely no offence can arise?—While the wide divergence between our respective points-of-view becomes clear as daylight. With equal honesty, each is seeking the Truth, but one or the other (quite conceivably the author) is seeking blindfold.

Quotations.

(i) “We are told that the lion and the tiger hunt by scent and not by sight. This means, *if it means anything at all* [italics mine], that these animals have no use for eyes! Undoubtedly, if the wind is in the right quarter, they will be apprised of food . . . not seldom, probably, they alarm their intended victim by stumbling upon it unawares.”

(ii) “If it be true that predatory animals are mainly dependent on scent, it must mean that a lion deprived of sight would have almost as good a chance of survival as another with vision unimpaired.”

(iii) “If these creatures depend for their dinners, not upon their eyes but upon their ability to pick up faint odours, then . . .” etc.

There you have, *in ipsissimis verbis*, the picture of a lion—of the lion of zoology: a picture that goes to make one's bones creak. Verily the lion of Heraldry, the "Lion Rampant," is a grotesque caricature: this lion of a pseudo-zoology is not merely grotesque, he is a helpless imbecile to boot—a sightless phantom aimlessly wandering forth into the night, then barging around on some vague idea that, somewhere or other, "*faint odours*" may be encountered, *so the wind keeps right!* That sort of lion would require to have his food brought him each afternoon by a keeper (in livery).

As compared in hunting-craft with a lion, why! the very cream of our human hunters are but as tyros. Instinct, in this regard, leaves intellect "unplaced."

I have suggested that the lion of the Colour-Protectionists would need to have his food brought to him each afternoon by a keeper (in livery). The lion of African forests is a different animal: but ill it befits this feeble pen to depict such Majesty.

"Lions are kings of beasts, and yet their power
Is not to rule and govern, but devour."—BUTLER.

The forest-lion of Africa is past-master of every art and artifice in field-craft, specialised not only in each one of the five recognised senses, but in others which are unrecognised to boot (including nocturnal vision); and equipped not only with a death-dealing armoury, but with the living instinct of a hunter and with that discriminating Knowledge which is Power. The daylight hours he has slept hidden away in the sightless depths of some ten-foot reed-bed or dense thorn-thicket: but now—an hour after dark—along with his mate, he sets forth on rapine intent. The grim pair hold parallel lines, say a hundred yards apart, maintaining touch by low soughing signals, and either directly up-wind or slightly athwart it. Bear in mind that the WIND and the DIRECTION of the wind are always the dominant and governing factors in *all* hunting of this type, whether by man or by beast. For the *wind* carries the scent. Never do either "*stumble upon a victim unawares.*" Such

contingency may be scientifically conceivable, but is physically impossible: for the precise position of the "victim" (within a yard or two) would already have been revealed to the lion's nostrils at a good half-mile. No, nothing is ever "taken unawares" in the sense above suggested. Equal physical conditions apply to either the hunter or the hunted. All is governed by the fixed rules of fieldcraft and by the rigour of the game.

Amidst abundant game, no long time will pass ere the prowling pair strike scent—no "faint odours," mind you! (to that I refer later)—but the strong and unmistakable aroma that issues from a troop of zebra or hartebeest, perhaps of buffalo, or maybe a couple of waterbuck—the sort of aroma that any beast-of-ravin will instantly detect at, say half-a-mile, probably far more.

The Game may be nearer or farther. If straight up-wind its scent will be caught at 500 yards or more. Possibly a fickle flaw in the breeze may reveal a troop as near as 200 yards, but a trifle off the line, to the right . . . in such case, both lions shift course five points to starboard. On a straight scent the distance may be anything up to, say, half-a-mile.¹

We will presume that, in the present case, our lions have "found" at 500 yards and that the intervening terrain favours—meaning that it is "good stalking-ground." Then, the rest of that night's work may be promptly completed—as easy as shelling peas. But should the endangered herd be standing

¹ We have no criteria to gauge the maximum distances at which, in high-dried Africa, animal-effluvia may become perceptible to the nostrils of a night-ranging lion. Judging by the analogy of what we see of antelopes and other such game by day, it may safely be estimated at half-a-mile in a steady breeze. Being a Feline, the lion has probably a lesser scenting-range than wild hunting-dogs (*Lycæon*), wolves, or hyaenas. Still, half-a-mile is certainly a minimum for the lion. In the more humid atmosphere of northern lands—say Norway—the range of "scent" is infinitely greater. Concrete instances are given in my *Wild Norway* (and referred to later in this book) of both elk and reindeer being warned or detected *by scent* at ranges up to three miles and beyond.

Another factor is constantly overlooked:—That the effluvia given off by the lion himself extends far to leeward—presumably quite as far, or further, than his own nostrils are effective to windward.

well out in the open—that is, without intervening “advantage”—then strategy comes into play. Silently the lioness ranges forward, fairly broad on the left: her Lord presently creeping forward either on the direct line or slightly to the right thereof. His is the forlorn hope. The manœuvre involves a combination of stalking and driving in one. Should the double event succeed, well and good: but in either case the terrified troop dash straight past where Her Majesty lies in wait, crouched flat behind some desert-bush, and probably within 50 yards of the game’s line of flight. Then a double success may reward the lucky pair. Not always, however, is “good-hunting” assured, whether to beast or man.

What possible or conceivable part can *colour*—be it light or dark, spotted, striped, or plain—subserve in midnight tragedies such as this?

THE LION BY NIGHT.

Among the many and weird theories which have been erected to bolster-up this fallacy of colour-protection, is one so inexplicable that it is difficult seriously to consider it—still more to reply to it. That is, the proposition that *because* a nocturnal animal hunts by scent, *therefore* he can have no use for sight at all. Does such proposition consist either with logic, with common knowledge, or with common-sense? Take the everyday case where a setter is seeking grouse by day. Obviously his hunting is exclusively by *scent* alone—since his quarry he *never sees* . . . till it is sprung by his Master. But if that setter was not simultaneously using *another* organ—that of sight—he could not traverse rough moorland at speed. Much less, in rugged African forest, could a *blind* lion perpetrate his deeds of violence in pitch darkness. Unlike the setter, the lion has not only to *find*, but to *kill*. Surely the fact is patent that *both* faculties, in either case, are in full action—each on its own specialised purpose, though sight may not be employed in the earlier stages. Surely the nocturnal hunter requires not only the two senses named, but all the

five . . . and more also! That *ought* to be self-evident, nor need this demonstration in cold print?

It may perhaps be pertinent to add that, in the dusk, all the warm colours of the spectrum (reds and yellows) tend to darken; while cold colours (blues, etc.) show up lighter.

SCENT—ITS STRENGTH AND RANGE.

The actual potency or strength of the aroma given off by wild animals appears to be consistently under-estimated, even if not ignored. One reason may perhaps be found in the relative weakness of our human olfactory sense. A new-killed grouse, for instance, reveals to our nostrils (even when plunged among its feathers) no very special smell at all: yet a setter will instantly "wind" it at 100 yards—and upwards on a breeze.

As we have just read, the scent or effluvia exuded by antelopes or other large animals has been lightly dismissed as "faint odours." Surely no expression could well be more misdescriptive or misleading? This is the sort of misconception which upsets the whole case: yet it is upon just such erroneous bases that many "Theories" rest. In Africa it is of common occurrence that our savage native gun-bearers detect *by their own nostrils* the presence of, say waterbuck or buffalo at quite considerable distances—perhaps a quarter-mile or far more upwind: and in Spain, riding by night through the dark pine-forests, we oft recall our Spanish gamekeepers silently indicating "*Deer ahead.*" Five minutes later, as we rode on, there would come the crash of a stampede, as the game rushed away through bush or splashed across water.

Such human faculties—even savage faculties—are, nevertheless, the merest bagatelle by comparison with the olfactory powers possessed by all wild animals, hunters or hunted alike. All these, moreover (especially, in my own experience, buffalo, zebra, and waterbuck), exude not only a strong aroma perceptible up to long ranges, but one which is specifically distinctive and recognised as such by their neighbours and congeners. That is in Africa. In Norway, as every elk-hunter

knows, that giant deer (*Cervus alces*) will take alarm from the scent of man up to three-miles' distance, and probably more: while, vice versa, the Norsk elk-hound will "wind" the elk at quite an equal range. All this, in many concrete instances, was set forth in detail more than thirty years ago in my *Wild Norway* (1897), which work also contains similar experiences with reindeer—the whole being subsequently confirmed and corroborated by hunters of world-wide authority, such as my late friends J. H. Elwes, F.R.S., and E. N. Buxton—see *The Borders and Beyond*, pp. 407-8. Yet to-day, in face of repeated evidence of field-naturalists of life-long experience, such exudations are cursorily dismissed as "faint odours"! Surely in some matters modern knowledge progresses backwards?

[Though not parallel, I would also fain refer to Selous' record of his thirst-stricken oxen "scenting" water at a distance which next day proved to be *twelve* miles—*African Nature Notes*, pp. 320 *et seq.*]

There is, of course, nothing unnatural—far less culpable—in the fact that our most erudite zoologists should be in total ignorance respecting things which to a hunter (black or white, civilised or savage) are familiar as the primary elements of his craft. It would rather be surprising were it otherwise, since such subjects lie quite outside the lines of scientific thought, further still from its normal practice—one might as reasonably expect a punt-gunner to dilate learnedly on the nebular hypothesis. Note, incidentally, that no punt-gunner is ever guilty of such folly! The pity ever is when anyone, gentle or simple, is tempted (as in this case) beyond the bounds of his Province—*Ne sutor ultra crepidam*.

"Who bids the stork, Columbus-like, explore
Heav'n's not his own and worlds unknown before?"

The impersonal answer to Pope's query is "instinct"; but human activities are guided, not by instinct but by intellect: and intellect alone would not subserve the stork's needs in world-navigation. The century-old aphorism of Gilbert White

which is preposed to these chapters, stands good to-day and will ever remain so. The above, it will clearly appear, is written from the point-of-view of *instinct*—by a semi-raptor!

No personal bearing is—or ever should be—attributable to honest disquisitions of this sort. The essential points are, not what this distinguished individual or that may have thought or said, but what are the true facts of Nature. That ought to be the single object sought, though the Truth is sometimes obscured by a haze of personal irrelevancies.

BITTERN.

The bittern is so favourite an example with our colour-protectionist friends, that its case is worth special examination. To begin with, the bittern is strictly nocturnal, rarely seen by day even in those countries where it still abounds. The hours of daylight it passes unseen, hidden deep in densest swamp-jungle and in marshes remote. Few see it. Of the various writers who have dilated on its wondrous adaptation, etc., how many have actually *seen* a bittern in still life? Or, if they had, would they ever have indited those brilliant platitudes?

Admittedly amidst multitudinous jungle of reed-wreckage and tall marsh-plants, it is all but impossible for human eye to detect the somnolent and immobile bittern—unaided. But during long years in its favoured haunts, I enjoyed the co-operation of the hunting-dog; and when, in Lusitanian marsh or Boetican wilderness, old *Niło* stood steady outside some dense reed-clump that *one knew* would hold nothing except a bittern . . . then one learnt a lesson. A remarkable apparition was dimly revealed, its attitude absolutely vertical—from an arrow-like beak, pointing directly Heavenwards, downwards through a narrow head and neck, gradually but very slightly broadening towards the compressed body beneath. That body, mark you, is wholly concealed in dense undergrowths, and the entire figure is rigid as a stone god! It is not the colour—prettily as that assimilates—but the strange unlikelike posture—or imposture?—that defies detection (coupled

with the fact that seven-eighths of the creature are not in sight at all!)

Note that *Niño* has seen nothing. The dog actually shrinks back scandalised when, from that tiny nucleus, there expands a thing as big as a brown table-cloth, and a pair of huge green legs completes the procession!

False Analogies?—One reason why I have selected the bittern as a text for this little sermon on Wild Nature is that the case seems scarcely ingenuous. As his nearest neighbour and relative, the bittern has a sort of counterpart so nearly alike that, at short range, one can hardly tell "T'other from which." Yet that neighbour, the night-heron, the moment it reaches years of discretion—that is, maturity—discards the "obliterative uniform" and assumes instead a strikingly conspicuous raiment of pure white and pale French-grey which "advertises" its position a quarter-mile away! You cannot cite the one case, and then ignore the other.

Complete colour metamorphoses such as this are not uncommon in Nature. There are, for example, the big gulls, which remain brown for years, and then turn white. Their case was demolished forty years ago in *Wild Spain* (pp. 112-115), and *that* "fable" has never since been "resurrected." The current practice of adducing a single example which may superficially support some contention or other, while ignoring scores of cognate cases which would equally negative it, is doubtfully ingenuous, and certainly not helpful. For to cite each individual case in detail is a task without end—like house-to-house fighting! No sooner is the "enemy" expelled from one house—or one street—than he takes momentary refuge in another and opens fresh fire from an equally hopeless tenement. Thus does futile discussion "drag its weary length along"—worse than a wounded snake, more tiresome than trench warfare. It may last another forty years!

"Whether he measure earth, compute the sea,
Weigh sunbeams, carve a fly, or spit a flea,
The solemn trifler, with his boasted skill,
Toils much and is a solemn trifler still."—COWPER.

CHAPTER X

THIRST

AN ENIGMA OF THE AFRICAN DESERTS.

(1) —**Waterless—Rainless—Dewless Deserts.**

[*Definitions*—The meaning of the word “water,” as used herein, is confined to its everyday sense in conversation and excludes cryptic chemical combinations: similarly, the word “thirst” must be understood in its colloquial sense.]

THIRST in the animal-world we are wont to regard as universal as we know it to be in the human. That, as a general rule, is actually the case: but in torrid Africa we come face to face with instances that seem to negative the belief. Nature’s laws are never as those of Medes and Persians.

It is an accepted axiom in biology that neither animal-life nor plant-life can subsist without water: yet, without doubting the accuracy of that creed, we find in Africa regions so arid and anhydrous as, at least, to give one pause. In the vast Sahara, for example—an area perhaps half as big as Europe—there are regions wherein no water exists over many a thousand square miles; nor does rain fall during the twelvemonth—nor during the centuries; while dew is also an unknown phenomenon. In short, there exists neither water nor moisture under Heaven or Earth, while the high-dried atmosphere scorches like the breath of a furnace. Assuredly this Torrid Zone brings us up all-standing against Watts’ pretty poetic ideal, where—

“Afric’s sunny fountains roll down their golden sand.”

Such Elysia may yet exist, but the likeliest “draw” would probably be the Witwatersrand, where the steam-pumps of Johannesburg assist the function.

As vivid and forceful a picture of such scenes as words can paint, occurs in Mr Winston Churchill's book *The River War*. Of the Deserts of Kordofan in the Northern Sudan, Mr Churchill writes in the poetry of prose:—

“Level plains of smooth sand, a little rosier than buff, a little paler than salmon, interrupted by occasional peaks of rock—black, stark and shapeless. Rainless storms dance tirelessly over the hot crisp surface. The wind-driven sand gathers into deep drifts, silting among the dark rocks as snow hangs about an alpine summit—only this is a fiery snow, such as might fall in Hell. The earth burns with the quenchless thirst of ages, and in a steel-blue sky no cloud obstructs the relentless triumph of the sun. . . . In deserts where thirst is enthroned, and where rocks and sand appeal in vain to a pitiless sky for moisture, it was a savage trick of Nature to add the mockery of the Mirage.”

That is a powerful passage. Poetic, it may be; yet none the less essentially true to Nature in substance and in fact—precisely according with my personal experiences during three years in those awesome Deserts of the Sudan; though, *æquo pede*, surpassing any powers of this feebler pen to depict. How, under such hellish conditions, is the existence of *water* (or any fluid, even chemical) either conceivable or compatible? Yet we *do* find in the Eastern Sahara a survival not only of plant-life, but of big upstanding quadrupeds—antelopes such as Oryx and Addax scaling 300 or 400 lb. apiece, with various gazelles (not to mention bird-life and reptile-life), all thriving and flourishing exceedingly, though it appears a sheer impossibility that a real refreshing draught of pure water can moisten their gullets from birth till death. The plant-life, it is true, is sapless and desiccated, as it were but living skeletons—(dwarf mimosas and starveling alfa-grass bleached paler than the thirsty sands around; wizened thorns and a spectral broom, *Leptadenia spartium*, with similar mummified shrubs).¹

¹ The anomaly is intensified when one sees the immense quantities of water absorbed by our household plants. Unless provided with it in *bucketfuls*, leaves droop and crinkle and blossom fails. Without water, many home-plants would die outright within a week or two. Yet these desert-plants survive, thirstless, year after year.

But beyond these poor, poverty-stricken relics of plant-life, we find—and herein lies the marvel—the great vigorous antelopes aforesaid. The headquarters of these thirstless animals lie far away out in the Desert—many days' camelry beyond the last known waters—that is, beyond the farthest outposts of nomadic Arab penetration. And even at these outposts, the Arabs have to sink wells to a depth of 70 or 80 feet to obtain any water at all. It seems logically impossible that wild animals, bird or beast, can obtain a drop of water from year's end to year's end. What is the explanation? How do those great vigorous beasts subsist without an element that is vital to the rest of the animal-world, and upon the sapless, desiccated nutriment, above described?

There exists, it is true, the bitter melon which big-game, alike in the Sahara and in the South-African deserts, eagerly dig up and devour. In the Kalahari (which is subject to seasonal rains), even the native Bushmen are independent of water throughout the long dry season, relying exclusively for drink upon the water-bearing tubers. But these collateral facts merely shift the question without answering it. For whence does the melon (*Cucumis caffer*), or any other water-bearing plant, derive its moisture?¹

Right here, it seems appropriate to interpolate a Note on a singular paradox bearing on thirst and thirstless animals. In the Sudan, we have two closely related forms of the hartebeest group, namely the Tiang (*Damaliscus tiang*) and the Korrigum (*D. korrigum*, figured at p. 126)—animals so nearly alike that a casual observer would scarce differentiate between them: yet, as regards thirst, as wide apart as the poles in their habits. The tiang is a thoroughly bibulous beast. It inhabits the Steppe regions bordering on White Nile, and is specially careful to resort twice a day to that river—just before dawn and again at dusk—and enjoy two “long drinks.” We know that, for each daybreak reveals them retiring from

¹ See *Selous'* remarks on water-bearing tubers in the Deserts of South Africa—*African Nature Notes*, pp. 209-210; also *Oswell's* records of fifty years earlier, in the *Badminton Library*.

the watering-places: and each evening we watch their thirsty files drawing down thereto. Yet in precise reverse, their first cousin, the korrigum, elects to reside permanently (along with oryx and addax) in the waterless Deserts of Kordofan, hundreds of miles from Nile, and where never a drop of pure water can moisten his torrid throat and tongue year in and year out. It is a contrast that passes understanding.

The giraffe and the roan antelope come under a separate category, since both are observed to drink freely *when opportunity serves*: yet so remote from water are some of their Desert haunts, that one is driven to the conclusion that these two animals are capable of enduring thirst (or, at least, the lack of water) during quite indefinite periods. Selous' remarks on the giraffe in his *African Nature Notes* (pp. 209 *et seq.*) leave nothing to be said on that point.

Some years ago, when writing *Savage Sudan*, I corresponded on this subject with the late Professor Balfour of Edinburgh. Unfortunately, my own ignorance of the *arcana* of Nature's chemistry and the technical terms appurtenant thereto, prevented my understanding the full import of his remarks. The explanation appeared to be that Nature runs a sort of secret laboratory in the deserts, whereby there is generated fluid—not true water, but what is scientifically known as “hygroscopic” water, and that that substance, gathered by far-spreading root-hairs of plants, suffices at least for the survival of plant-life in the Desert.

The following is an extract from the accomplished Professor's letters:—

“Plants growing in waterless deserts are variously attuned to their environment. Some may store water to tide them over long periods of drought. Others, such as the mimosas which you indicate, are able to hold such water as they may obtain in the wood-tissues which they form; and also obtain a certain amount from the atmosphere.¹ The roots of these plants spread for long distances and their rootlets attach themselves very firmly to the particles of sand in the soil. There may

¹ Herein, it is clear that the Professor assumes potential supplies which, by my diagnosis (presumably mistaken), have no existence.

be no *free water* in the soil, and yet an adequate amount of what we call 'hygroscopic water' in the particles, and from these particles the root-hairs of plants may get their supplies. The important point for you to consider is that, while to us human beings the soil may appear quite dry, yet we know that each particle has a film of hygroscopic water from which a plant may draw for its water-supply."

Now, accepting the above findings as scientifically and incontrovertibly established (as I certainly do, despite their startling novelty to a layman), it would still remain incomprehensible—even though plant-life may survive thus—that great wild beasts such as oryx and addax should be able to thrive and flourish in vigorous strength while deprived of an element that to the rest of Creation is absolutely vital—to wit, pure water. Science, however, has gone a step further towards solving the enigma. She teaches not only that *all* plants (including those which form the food of these animals) retain a certain minute degree of moisture—(even *dead* plants, though completely "air-dry," are not *chemically* dry)—but advances a supplementary solution, thus:—"During digestion a certain additional amount of water may be elaborated as a by-product of the breaking-down of the complex chemical bodies of which the plant-food of these animals consists"—(Dr P. A. Buxton).

Yet even so, Nature surely treats her Desert-creatures in a cruelly niggard measure? 'Tis but a poor "pussy-foot" method of relieving thirst in great animals that, under normal conditions would revel daily in a long drink—say by gallons at a time? Instead of generously flushing their parched throats so, these poor antelopes are condemned to thrive on homeopathic doses of hygroscopic fluid in solution, *plus* what moisture may be chemically extracted from (very slightly) damp food. Verily it strains lay credulity well-nigh to the breaking-point to conclude that any number of such microscopic doses could appreciably allay a burning thirst in great bibulous animals such as these: yet in the total absence of any alternative, that solution must stand.

The above remarks, it will be understood, apply exclusively to those awesome deserts (such as those of the Sudan), where

never a drop of rain falls—nor has fallen for centuries—where no dew refreshes, nor green herb can grow—where no shade exists to afford shelter from a pitiless sun, which for twelve hours each day reduces God's earth to the similitude of a burning inferno. Veritable Gehennas these, where that tropic sun seems to evaporate the very life-blood and to laugh to scorn the presence of moisture—even hygroscopic. Yet the deeply introspective research of Science has proved that that element *does* survive, even here. The quantity may be microscopic, but it serves its allotted purpose.

(2)—Waterless Deserts subject to Seasonal Rainfall.

There exist other Desert regions less accursed by Nature—deserts which, while equally torrid and waterless, are yet subject to a short season of torrential rains and where, in consequence, the above cruel conditions are, to that limited extent, proportionately and intermittently modified. Such, for example, is the Kalahari in South Africa, besides those areas of the Southern Sahara itself which fall within the limits of the tropical rainfalls of Equatoria. In such regions, their denizens may not only drink their fill during the rains, but also—it maybe—accumulate store of liquid resource sufficient to forestall, say nine months of enforced abstinence. During those nine months, the bitter melon appears to represent the sole water-supply for man and beast.

(3)—Dew-Drenched Deserts.

Thirdly, there are deserts which, albeit rainless, are yet endowed with an abundant dewfall. One such falls within our personal experience—those barren hill-ranges which overlook the Red Sea. Each evening in Spring, from that historic Sea, there blows up a night-breeze so saturated with moisture that dawn reveals the naked rocks—barren as a lunar landscape—glistening as wet as though a heavy thunder-shower had just fallen.

On these hills big-game abounds—in particular, the graceful

ariel and smaller isabelline gazelle: there is a sprinkling of ibex on the heights, with Nubian wild-asses on the plateaux below. At first we were sore puzzled to imagine whence these animals derived their water-supply in a region so arid that we had ourselves to send camels a two-days' journey to obtain our own. The explanation was not long delayed. It was due to the copious dewfall, and to the moisture-laden mists that, sweeping up nightly from the Red Sea, drenched the hills. One curious effect was to generate on the rock-surfaces a spontaneous growth of mossy film—a kind of primordial plant-life capable of retaining moisture with sponge-like tenacity. This cryptogamic growth virtually provided ubiquitous drinking-reservoirs throughout the hills, but especially on their seaward faces. Possibly these sponge-like receptacles (equally with the bitter melons of the dewless deserts) are expressly designed so that the larger animals may avail an exiguous supply? For big quadrupeds could scarce *drink dew* otherwise—i.e., unless so concentrated and stored for them. Indeed even the birds largely neglect dew as a beverage. Just as day is breaking, one sees the Desert-larks (*Certhilauda*), and other species, daintily sipping drops of dew that glisten like jewels beneath bent grasses; but within brief minutes after the fierce Sun-god shall have cleared the horizon, his heat will have evaporated every particle of independent moisture. Their opportunity for dew-drinking is thus limited to moments; nor is it probable that the matutinal hour should provoke thirst in the bird-world.

The film of aqueous moss on the Red Sea hills, and equally the bitter melon of Sahara and Kalahari, are probably Nature's provision to enable big-game (and Bushmen too!) to enjoy at rare intervals something that resembles water—something wet! We thirstier mortals, however temperate, can appreciate what a luxury even half-a-mouthful must be to parched throats and torrid tongues—how much more to big quadrupeds whose only chance of a drink is restricted to homeopathic doses of a hygroscopic substitute, or evolved by chemical process from the digestion of "damp food"? Oh, yes! were the Author an oryx, verily he would spend a big proportion of his days

searching the Desert for those vital indices—that cluster of tiny leaves which betrays the presence of a bitter melon in the burning sands beneath!

May it be accounted as righteousness unto me, who, alas, so often find myself in disagreement with orthodox Science,¹ that, in this matter, I accept her decisions without reserve, complex and involved as they are. Her verdict, moreover, must appeal the less to a naturalist by virtue of its apparent cruelty to our animal-friends of the waterless tropic. To them, the pleasurable sensation of drinking is utterly denied; for its substitute. . . . Well! Compare their fate with that of their luckier congeners of water-bearing zones. The latter we see for ourselves, revel in long drinks twice a day—gallons of it! Yet the marvel remains that whether they drink daily and in abundance; or whether they are reduced to meagrest rations of some pitiful substitute—no harm accrues. Both classes thrive equally and exceedingly. Remember also what an Institution we humans of Northern race are fain to make of the “Sun-downer” after the toils and trials of a tropic day. Read the “Pathology of Thirst” in Steevens’ *With Kitchener to Khartoum*—a sparkling bit of light literature, and true forby. All these joys of life are denied to Desert creatures in a torrid zone. Then, as Steevens sagely concludes, “To-morrow also will have an evening.” But that is reserved for humans and refused to our poor outcasts of the Sahara! Yet they thrive.

“. . . Taught by these, confess t’ALMIGHTY just,
And where you can’t unriddle, learn to trust.”

—[PARNELL.]

¹ In every case, nevertheless, where disagreement has arisen, its genesis has been explained, not only with due deference but with a full statement of the grounds for such divergence, set out and elaborated in detail. Such grounds, therefore, if unsound or incorrect, it would be a simple matter to demolish. But they have never been so demolished. Perhaps they are unanswerable. Honest divergences of view (and of experience) should rather be a help than a hindrance in the search after Truth—too often, alas, they are metamorphosed into stumbling-blocks.

CHAPTER XI

SCENT

[So vital an element in wild-life is the faculty of scent as a safeguard, that most creatures, whether furred or feathered, fear more what they smell without seeing than what they see without smelling.]

THOUGH the importance of "Scent" as a factor in many British field-sports has become more or less obsolete to-day—always excepting the Chase of stag and fox, hare (not electric!), and otter—yet the subject retains its own intrinsic interest as an element in Nature's general scheme, apart from all venatic considerations. That is my excuse for returning to the matter of the olfactory faculties, albeit several of the more salient features have already been treated in *The Borders and Beyond*. Moreover, the subject has been very generally overlooked and often, when touched upon at all, rather badly mishandled. Let the single instance of the vultures attest that statement. To those huge birds an almost incredible power of "scenting" has universally been ascribed. As a simple matter of fact—provable, straight-away, by anyone who cares to study them in life—vultures possess no olfactory senses at all; nor do they need any.

Yet that "Sense of Scent" possesses several curious and some contradictory features. Roughly stated, the whole animal-world that goes on four legs and wears fur is gifted with the faculty of smell—often in an extraordinary degree. Yet, in precise reverse, to the feathered half of creation that gift has been almost totally denied. Birds have nostrils but they smell not.

There is the broad statement set out in general terms: but, in common with all rules, it has its exceptions. Among the quadrupeds, nevertheless, no single instance occurs to my memory that would form an exception. One and all within my experience—from the homely rabbit to the giant elk and buffalo, and the still vaster elephant—revel in keenest olfactory

powers. Among birds the case is reversed. The vast majority wholly ignore the safeguard of scenting, upon which their four-footed neighbours, great and small, rely implicitly as their first line of protection and defence. But the feathered race present at least one exception: for a fairly large section—that of wildfowl—are keenly alive to the faintest clue from scent. Upon these alert creatures that gift of scenting confers a



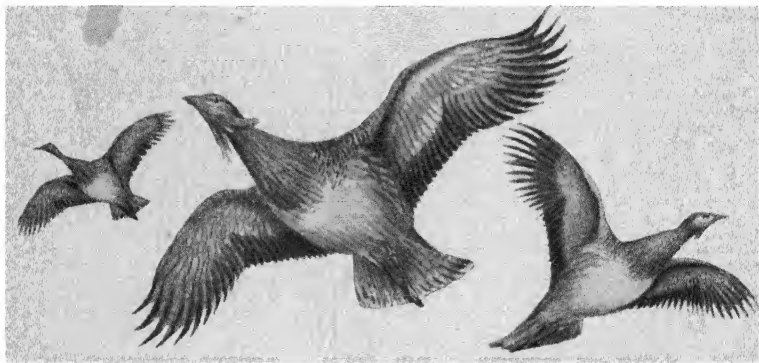
VULTURES SOARING

primary safeguard at least as effective as their eyesight, and more so than their hearing. Such, equally, is the case with quadrupeds. Yet—bar wildfowl—the feathered world neglect it to a unit.¹ Is it known whether the Cetaceans possess the sense of smell, or not?

¹ *Ostrich*.—In the *Badminton* volumes on Big-Game, a passing remark of my friend Sir F. J. Jackson seems to imply that the Ostrich is gifted with olfactory faculties equal to those of the giraffe and other big-game. I am not at all sure whether the reference was intended as a definite statement or not; but if so, the Ostrich must rank as a single exception in the bird-world—again excepting wildfowl.

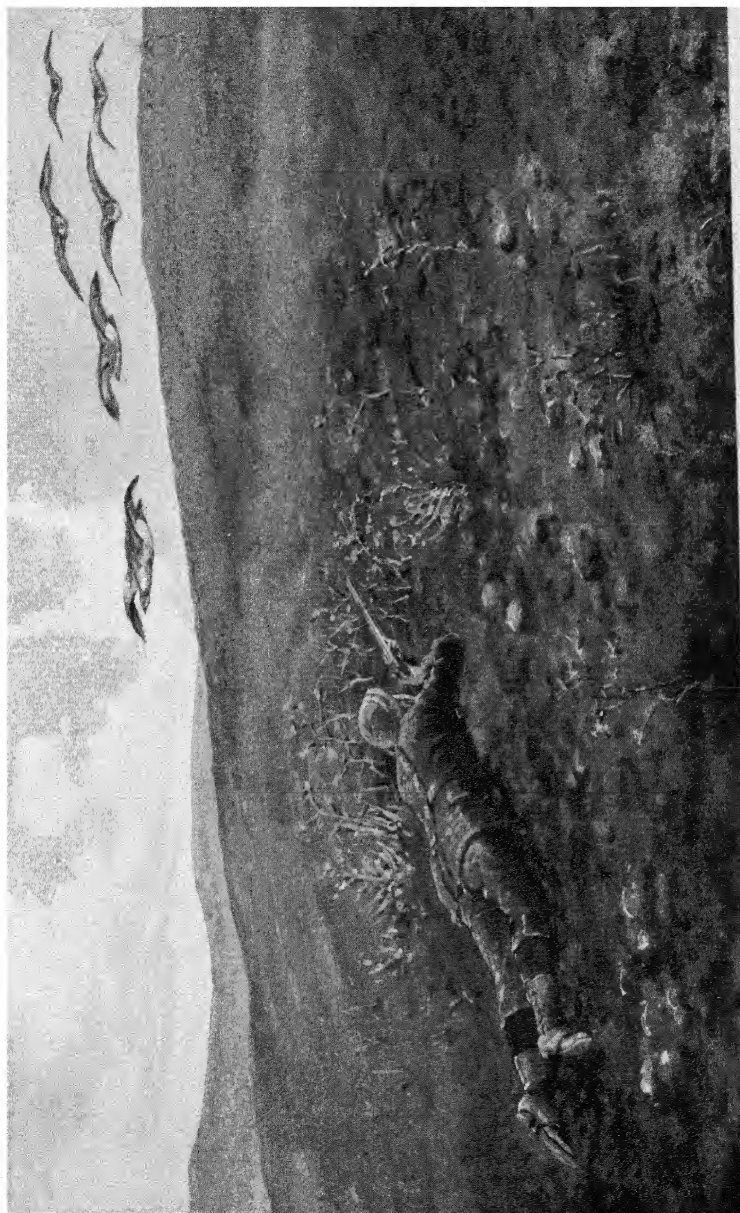
Surely the wide divergence in this regard between fur and feather is a strange anomaly? And equally strange that the double point should have been overlooked by generations of naturalists? Not even Moses alludes to it! Neither does Herodotus nor all the prophets.

TWO EXAMPLES FROM SPAIN.—Assuming present readers to be already acquainted with *The Borders and Beyond*—(and I must not offend their intelligence by doubting)—it is unnecessary to repeat the cases therein set forth. But two eloquent examples from Spain had escaped our memory when writing that book and are well worthy of record.



GREAT BUSTARDS SHYING-OFF FROM DETECTED DANGER.

Great Bustard.—That this grand game-bird has no perception of scent is revealed by the fact that when, during the hot, dry summer months, the Spanish peasants avail the matutinal approach of the bustards to their drinking-places—(those splashes of spilt water, wasted by droves of thirsty cattle while being watered at draw-wells far out on parched plains—as fully described in *Wild Spain*, pp. 35-36)—no account whatever is taken of the direction of the wind. Necessarily the hidden post, wherein the gunner lies concealed, is a permanency—or must, at least, be prepared beforehand: whereas the wind varies from day to day. But from whatever airt it may be blowing, it conveys no danger to the otherwise astute senses of the bustards. So long as they *see* nothing, the great



BUSTARD-DRIVING.

birds will slowly walk *straight upwind* and, suspecting nothing (though cautiously halting at intervals to reconnoitre), advance to within 20 or 25 yards of a human being with a murderous blunderbus.

Wild Geese.—"Though equally receptive of scent, geese are either less nervous in disposition than ducks, or more reflective in character. Ducks spring *at once* the moment their nostrils warn them of danger, although they have seen nothing. Geese, on the other hand, are apt to await—with rapt attention—some slight ocular corroboration of a risk already revealed by their olfactory senses" (*Borders and Beyond*, p. 434).

Confirmation of the above definition is afforded by a specific experience of our old friend Vasquez, keeper for more than thirty years on our marismas of Doñana.

Here is Vasquez' yarn:—At a temporarily frequented feeding-ground of the geese (greylags), he and his brother-in-law, Vergara—another trusted old keeper of ours—had scraped a slight hollow and erected over it a low shelter of reeds supported on canes—just sufficient to conceal two men lying flat in the hole.

At dawn of day the wind had changed to foul: nevertheless, some hundreds of geese—though infected by nasal suspicion, yet *seeing nothing*—continued slowly to approach the coveted patch of cañaliza (a green winter-grass of which they are specially fond) till within easy gun-shot, say 25 yards. Then, in order to make the geese put up their heads, Vasquez twice uttered a low challenge. But neither their perception of human scent, nor even the addition of the human voice, availed to persuade those deep-thinking geese that their *eyesight* could so completely have failed them. They halted between two opinions. Vergara then took them sitting, Vasquez as they rose, and eleven geese fell to the two antiquated spouts.

Vasquez' explanation was that *geese* refuse to believe a thing which, to their reasoned intelligence, appears impossible. They *know* that human beings stand near 6 feet in height, but fail to conceive that 12-inch rushes will serve to conceal

objects of that stature. Thereat their reasoning-powers fall short: since they cannot grasp the elementary fact that a 6-foot man *may* be lying flat! and a foot below ground at that.

Remember, also, that in both cases—with geese and bustard alike—their concealed enemies are lying slightly *below* the surface; and *that* circumstance, to some extent, arrests the scent; which may also be deflected by intervening rush or samphire in the one case, or by the skeletons of giant thistles in the other.

SCENT IN DUCKS.

A convincing illustration of the olfactory senses possessed by the duck-tribe is afforded by the Spanish system of fowling with trained stalking-ponies—termed *Cabrestos*—which is fully described in both our books on Spain. It is, in all cases, impossible to go undetected to the windward of ducks, even when the fowler is sheltered behind his odoriferous pony. The exudation of the latter, one might conclude, would certainly subdue and overwhelm the minor human aroma: but that is not the case. Ducks differentiate between the two odours—they distinguish the dangerous element, even though it be, say, less than 1 per cent. of the total volume! Ducks can never be approached, even behind a pony, from the windward. A pack of duck may often be so situate that, in order to approach them—owing to deep water, or other local circumstance—it becomes necessary to pass to windward of other straggling groups. These will at once, so soon as they fall under our lee, take the wind and go, although (their *degree* of fear being alleviated by the near proximity of vast bodies close at hand and all still unsuspecting) they may not go far, but alight just beyond their neighbours. There is obviously some feature in the flight and general demeanour of these smaller groups of startled ducks that reassures—or at least precludes a *general* alarm being spread by their short flight.

This operation of “moving” interlopers is, nevertheless, always delicate. As Vasquez puts it: “It is only your *simple ducks* newly arrived from Inglaterra that can safely be treated

thus." (Vasquez' geography, it will be observed, assumes that, outside Spain, England fills the bill!) Where ducks have been much harassed, the flight of those few displaced units may easily "shift the lot."

Of all the duck-tribe, teal (though the most simple) are the most keenly receptive of scent.

Vergara, also a lifelong fowler, reckons similarly—that while *all* ducks scent, teal do so more keenly than the others. Geese, in his view, are less amenable to scent than ducks: while the rest of the feathered creation—say partridge, bustard, great and small, and all the lesser birds—scent not at all.

RABBITS—THEIR SENSE OF SMELL.

IN SPAIN, during a shooting-day in the Coto Doñana, we were riding past certain stretches of cistus-scrub, conveniently separated by open sandy glades, where, on many a previous occasion, we had enjoyed some excellent rabbit-drives. Two English guests, both men of long experience, recognised the spot and begged for a repetition of that bit of "quick-firing." The wind, however, to-day was blowing from the opposite direction, and it is no more possible to drive rabbits *up-wind* than deer. Strange to say, both our friends ridiculed the idea that rabbits possessed any such faculty of scenting, and so intent were they on the "drive" that we were fain to consent. Our Spanish keepers, of course, recognised the utter futility of the proposal, and could not understand *why* we should be guilty of such absurdity. . . . Well, keepers and beaters soon encircled a big covert, the dogs were let go, and presently the music of their tongues resounded afar; but never a single bunny crossed the glade behind us where, *in a favouring wind*, 50, 80, or 100 flying scuts would have flashed by like lightning! The proof was signed and sealed; while the additional fact that three covies of partridge passed the guns right overhead helped to press the double lesson still further home. Clearly those partridge (unlike the rabbits) had scented no danger in the tainted breeze.

An almost identical incident with mallard will be found in *The Borders and Beyond* (pp. 431-2). Strange, indeed, is it to find that gunners of lifelong experience (all those mentioned herein have long passed to happier "hunting-grounds" above) should give never a thought to the every-day characters and aptitudes of the creatures they habitually pursue? Another convincing proof of the keen faculties of scent possessed (and used) by the duck-tribe will be found in *Savage Sudan*, pp. 240-1.

"SCENT"—(*Elephants*).

Symptomatic of the confusion of thought that underlies this question of scent, the following instance is illuminative. The frontispiece to my *On Safari* is a fine drawing by Mr Caldwell entitled "Overlooked," here reproduced by favour of Mr Edward Arnold who published that book. It represents an incident exactly as it occurred in British East Africa (now Kenya) on 23rd February 1906. The Author and his brother, each with a native gunbearer, are shown lying hid almost beneath the trunks of an advancing herd of elephants which, within a few more moments, would have completely enveloped the four hunters—the actual distance between us being fourteen yards. Now, it was gravely suggested that such an episode was totally impossible, since the elephants would, long before, have been warned by their nostrils of human presence. So, indeed, they would have been, *had the wind been blowing the opposite way*. A few moments' reflection might have suggested to those kindly critics that scent is not an independent entity, gifted with locomotive powers, but purely wind-borne. . . . Had those elephants been to leeward, they would assuredly have detected our presence—probably a mile away. Coming down-wind, as they did, they almost walked right into us, entirely unawares. Scent cannot travel a single yard up-wind. Thus do errors thrive and ignorance perpetuates itself!

CHAPTER XII

MEMORIES—ANGLING

I.—DISILLUSIONED . . . OR “THE 3.20 GOODS.”

HARD by the Scottish Border, the Lewis-burn, born among the wild fells of Mouncees, after traversing miles of moor and rocky gorges, falls into North Tyne—the tributary full as big as the parent stream. For years the Lewis-burn had been a favourite resort, albeit ill of access. From no roof-tree nearer than the little Blackcock Inn at Falstone can it be commanded, and thence only by catching the first North British train in the morning to Plashetts, returning at night by the last—(there are only three trains a day). This means twelve hours' work—or shall we call it twelve hours' bliss? At the close of such a day, while making towards the little station aforesaid about six o'clock, there appeared—a rare sight—another angler working towards me. He was fishing minnow upstream and—what time I watched—seemed to be chiefly occupied in landing trout of dimensions such as most of us only dream of. That those oft-fished waters sheltered such sockdolagers was a new light.

By the “cut of his jib,” or rather by fractions of a fustian uniform, I placed the stranger as a man of the railroad, and presently he told me that he had “just come up by the 3.20 goods.” Yet the packing-case that did duty for a creel held an assortment of spoils that amazed at the moment and has served as an object-lesson ever since. In the overweening pride of youth, I had begun to fancy that at least the rudiments of angling-craft had begun to dawn. From that evening on Lewis-burn, a broader horizon opened, and has since subsisted. Without conscious shame I realised that in this Art there exist

ethereal levels—levels of innate skill—to which neither keenness nor years of practice and observation *necessarily* lead its disciples.

True, the average fisherman may, and will, derive immeasurable pleasure, mental and muscular, from the exercise of his craft, without either attaining those superlative levels or even dreaming of their existence. Happier it may be (or it may not be) that he lives unconscious of the sublime fact that the truly great craftsman, whether with rod or gun, is born, not made. Equally, it may hap that the master-craftsman—like our friend of “the 3 20 goods”—is supremely unconscious of his own innate superiority.

II.—DISPOSSESSED.

Scene.—One of the bigger Cheviot burns in mid-May: water running strong after a spate; but in fine colour and ply.

For a full half-hour, we (Ternent and the Author) had enjoyed one of those rarer spells of anglers' luck. Straight up a long dark pool—or rather two pools, since a transverse rock-ridge, just awash, crossed its centre—blew a strong breeze, nicely ruffling the surface at exactly that psychic hour when the trout were strong on feed. Hence, *for once*, the angler's lot was “fishing made easy”; and fun waxed fast and furious as beauty after beauty was transferred from burn to basket.

But even the best of pools—like aught else—has an end: and while we discussed giving this one half-an-hour's rest before a second time of asking . . . suddenly, from the clustering alders behind, there came a Voice. Close by stood an aged native, presumably prehistoric, for his whole visage was obliterated behind jungle-growths of ragged white hair; and whom, amidst major excitements, we had not noticed. “Ye've had a gey bit sport,” said the Voice; and the gleam of *wickedly* bright eyes shot out from two *slots* half-hidden by overhung eyebrows, as It added: “Now ye'll find jist sich anither pool fernenst yon scaur”—indicating a point a quarter-mile farther up the glen. Within brief minutes we had reached the said scaur. The burn here deflected at a right-angle, and at once

spread out into half-a-dozen tricklets over wastes of shingle and hoary grey boulders—not a pool within a mile! With mixed feelings, we fell back upon our former Eldorado, only to find . . . the owner of the Voice and of the wicked eyes permanently established by the waterside, seated on a three-legged cricket, and dishonouring that noble pool with . . . “Gentles” —[Left sitting—*alive*].

III.—MEGGAT.

This is a mountain-born burn that wants some wooing. Meggat is worth it—that is, if you strike her day (which is one among hundreds). On the *others*, reflect that the Ettrick Shepherd averred that he used to need a cart to carry home his spoils; also, that there is a credible record of a trout that weighed 19 lb. being killed in Meggat *with a hayfork*.

Meggat lies twenty miles from a railway: yet Andrew Lang relates that the crowds of anglers whom he saw jostling each other on its banks induced him to inquire if some “Political Demonstration” was afoot. That must surely have been in high summer: for earlier in the year one has the whole country to oneself, nor can I remember in spring ever meeting another angler on Meggat. But I *do* remember one April hooking therein by far the biggest trout I ever held on rod and line. This was in those seething rock-cauldrons a mile or two above the bridge at Cappercleugh. After certain frabjous minutes spent racing down foaming cataracts, the pressure proved too great and the gut-cast parted—hence there was no opportunity either to weigh or identify the lost monster.

The exceeding bitter heart-pangs usually engendered by such catastrophes were, in this case, mollified by the consoling reflection that the fish could have been nothing else than a salmon-kelt of 8 or 10 lb. Later, when I learned that no salmon reach St Mary’s Loch, into which Meggat flows, I knew that the nightmare had been a trout after all; but the sort of trout that’s “*best killed with a hayfork*.”

IV.—ANGLING HUMOURS.

One spring morning three anglers set forth from the little hostelry afore-mentioned, the Blackcock at Falstone. The trio belonged to an equal number of species and genera of their Order. One was a Master-craftsman of the Guild. His beat for the day was the main river (North Tyne); while the Author, with a London friend who shall be dubbed Mark Lane, were bound for the lusty Lewis-burn.

Arrived there, from a perfectly immaculate canvas-cover, Mark Lane drew forth a rod that itself, brilliant in varnish, equally suggested the savour of a tackle-maker's shop. Almost I began to suspect that that lovely implement had not before breathed the atmosphere of trout-bearing waters; and the suspicion deepened to conviction on observing its owner's methods of fly-fishing. These consisted in so dangling the cast that the tail-fly gently kissed the surface, or even danced a light minuet thereon. The other two flies served no visible purpose—unless as ornaments? or to deceive a swallow? The general effect was as though some non-aquatic insect, having fallen in the water, was striving to escape therefrom. It was a curious performance: yet scarce promising new lessons in our Art?

Well, we two arranged to meet for lunch at Yedburn Spoot, a romantic gorge where the burn comes tumbling over a horse-shoe rock-formation 40 feet high, with a kestrel's eyry close under the skyline, and ring-ouzels and dippers nesting on mossy ledges in its rock-walls. Presently Mark Lane hove in sight, still industriously playing his "trickle-game"—from fifty yards away I could discern the little dimples of the dance! The impression conveyed was not one of fly-fishing so much as "teaching a fly to swim." Nevertheless, to my mild surprise, he told me—without visible exaltation of spirit—that he had caught a trout. That mild surprise deepened to sheer amazement when he produced it. Ye Gods and little fishes! it was a monster; by eye-measurement not far short of 2 lb.—his first trout, and from a hill-burn where half-pounders were big.

The trout itself was no beauty, being black as a chimney-sweep, in consonance with the eerie spot whence Mark Lane had entricked it—a deep black hole betwixt sheer impending crags and with boulders big as cottages in its bed. Still, when tested on the scales in the evening, that trout registered an ounce over $1\frac{3}{4}$ lb.

Meanwhile, our Master-craftsman had assembled three dozen of trout from the main river—very even-sized; none quite the full pound, yet aggregating better than three to the pound—quite a creditable performance. The Master, however, (like most really great men), had one weakness—he disliked being beaten. The trait had probably grown by what it fed on, since the event could but seldom occur. To-night, however, on seeing Mark Lane's single monster, the Master's countenance visibly fell. Again and again he turned the defunct over in meticulous post-obituary research. Then, suddenly, a light flashed from his eyes:—"Why, that trout has only *one eye*! . . . any idiot could catch a one-eyed fish! . . ." (In full honesty, he should have added: "So it was approached on its blind side"? but let that pass.) In the result, joy resumed her reign and the green eye turned to gold.

V.—A FIRST EXPERIENCE IN SALMON-FISHING—BORDER ESK AND LIDDEL WATERS.

(BY ALFRED CRAWHALL CHAPMAN.)

At Canonbie this evening (20th September 1892) the Major and I found the inn filled with a jovial company of anglers, some of whom had been fishing hard for a fortnight. One—a Scottish Radical of the keener type—had killed an 8 lb. salmon. The rest had done nothing in two weeks; yet all remained full of hope (unlimited) and meant "sticking-in." Of local anglers the name is legion, and their methods of taking salmon highly curious and equally nefarious—of which anon. We inquired for a gillie and one Steel, fifty-six years of age and over six-foot high, was deputed to us. Steel was a miner and reputed

the most skilled angler on the Border Esk. This was doubtless true, whether as regards conventional fly-fishing and other methods more questionable—as we presently learned. Steel was a man of few words and cautious to a degree in those: a direct answer to a question was not in his category; but a pair of powerful binoculars, carefully wrapt in soft paper and stowed in an inner pocket, appeared to form an essential component of his angling equipment. Other strange articles it also included; there were small squares of sheet lead each pierced with a central hole, also small clay balls similarly perforated and hardened in an oven; pistol-bullets, nicked and silk-threaded, he likewise possessed, in addition to a good stock of ordinary salmon-flies and casts. But wherefore the above quaint devices? The reason we soon found was that our worthy gillie, in common with probably nine-tenths of the local anglers, are poachers to the core whenever occasion offers, and “snatching,” or *snigging* as it is called, is the normal method by which salmon in the Border Esk are grassed. Some, of course, are caught with fly in the regular manner, but for one so captured are not nine taken by the snatching process? [Note that this was writ near 40 years ago.] Well, before bed-time we had learned a great deal about fishing that we never knew before and turned-in dead keen to see some of these “arts” in practice on the morrow.

There were some four miles of preserved water available on Esk, the chief casts being the Long pool, the Cauldron, and the Willows—the latter being the junction of Esk and Liddel. The Cauldron and the Willows are much the best pools, holding the best fish and by their shores, in consequence, may oft be counted as many as twenty or thirty men, including anglers and gillies. The water-bailiff is generally close at hand and is assisted in his unenviable task by the local police.

On 21st September we started at the Long Pool and here, under Steel’s tutelage, I had my first lesson in casting and working a salmon-fly. Quite rightly Steel impressed the importance of what he called “hanging the fly well on”—a

bagged line, with a fly trailing after it, is no manner of use. The fly must be "fishing"—that is, *instinct with life*, which effect can only be attained by casting at the requisite angle downstream and keeping the whole line straight. The water to-day was in excellent order, yet only one fish was taken with fly, none of the other anglers doing anything. The 22nd was a brilliant cloudless day and some twenty anglers worked all day blank, though we heard of some "snatched" in the early hours. I *did* just "touch" a fish in Dam-foot—it was my first touch of a salmon and that one does not forget. The 23rd, though overcast and sunless, was again a total blank all round, that is as regards legitimate angling; but we learned that five fish were "snatched" before 8 A.M. in the Willows Stream, and two late at night in another pool. Three men were caught and will be summoned. Final result:—Fined £5 each and costs!

As regards the rivers; Esk at this season was simply cram-full of salmon. All day long fish of every size from two pounds to twenty, and monsters far heavier than that, with broad backs like porpoises, were leaping, rolling, and wallowing on the surface or falling back with a splash *ratione ruentis acervi*. It was well-nigh a ridiculous spectacle to watch, say the Cauldron or the Willows Pool—the central waters all a-boil with salmon, while on either bank stood posted five or six anglers arrayed some twenty yards apart! The river is not wide—by wading deep it can be commanded right across: the result is a tissue of lines crossing and recrossing the same water from either side! The anglers, too, are skilled men, old in the craft and devoted thereto. Between their intersecting lines, salmon keep leaping and bounding all over the pool—some great brutes that look like 30 lb. or even more. A few are brilliant silver-clad fish that gleam in the sunlight; others coal-black above with deep red or orange-hued sides and bellies: others a dirty yellow, or combinations of these colours—all bounding about the pool or falling back like meteors cast from heaven, such is the plumping splash as some whale-like monster falls flat on his broad-side. Yet not a fly will

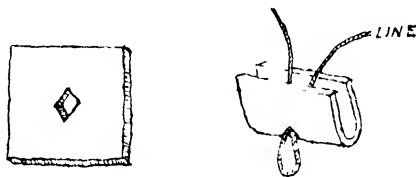
they touch! Every variety in size and colour of approved lure is daintily placed before their eyes—three times a minute! Yet they not only ignore the temptation but appear absolutely oblivious of its presence. Salmon after salmon shows right under the rod-point: while wading, you see them come swimming up towards you—then a silvery gleam under water reveals a speedy departure. Night draws on, the fish still gambol. Night-flies of every type are employed, but only with the same results, and the anglers retire homewards, declaring that they never knew the fish so “dour”! To us bystanders, the phenomenon seems to offer quite a variety of constructions.

Now for the *snatchers*! These experts waste no time over their business. They work in couples—one man to fish, the other to act as sentinel against the bailiff and the *Law*. Here that concealed binocular comes into play; but the bailiffs also are provided with telescopes, so it is diamond cut diamond. The law is fairly rigid. A man detected casting *upstream* is liable to be “reported,” which equals a presumptive “first offence.”

Now there come into play those mysterious devices we saw, in wonder, that first night. The favourite tackle of the Snatcher is a big “Stewart” properly weighted: a worm can be affixed or not, according to taste: if used at all it is merely as a “colourable pretext.” A fly-hook will also serve, provided it is *weighted*. Thus equipped, the weighted hooks are cast 45° upstream and on a short line. The slightest friction on the line is the signal to strike. It may be a stone: it *may* be a fish. In the latter event, the salmon will be foul-hooked and the play begins. A fin is the favourite hold, but the *tail* is even more fatal! for should the captive once jump—showing thereby that he is hooked in the caudal—the poacher allows no further “law,” and by keeping the tail lifted clear of the water—(thus destroying the propelling power)—the luckless salmon is hauled straight ashore. “Lynch-law,” that?

Obviously the essence of the scheme is the correct *weighting*

of the line. Those little clay balls that we were shown—each pierced with a knitting-needle and slightly hardened before a fire—are threaded on the casting-line about a foot above the hooks. These balls rapidly soften and finally drop off—or in emergency, can be *jerked* off, thus destroying all proof of fraud, and leaving the offender free to *swear* he is fly-fishing legitimately! Those pistol-bullets are similarly tied to the cast, the thread used being such as can readily be snapped by any sudden jerk of the rod. Perhaps a more ingenious device is that cube of lead aforesaid, so secured to the cast as to drop off automatically when necessity requires. The sketch explains better than words. The lead is nipped between the teeth



tightly enough to retain a loop of the line passed through the hole; but not so tightly as to prevent a sudden jerk pulling the loop clear out of the hole, and so freeing the line from the lead altogether! It will of course be understood that the “necessity” referred to arises on the inopportune approach or appearance of some representative of the Law. Truly there are esoteric excitements here that surpass all the more normal joys of salmon-fishing.

So massed are the salmon in crack pools such as the Cauldron and Willows that the river-bed at these spots seem almost tessellated with scaly carcasses—hence each cast (up-stream) is reasonably sure to strike *something*; but a great majority of the fish struck finally escape owing to the insecure hold thus obtained. By the time that half or three-quarters have been scraped or pricked, it need not surprise that *all* grow “dour”?

Bearing in mind the incessant “raking” of the depths with weighted hooks, and the equally incessant plying of the surface

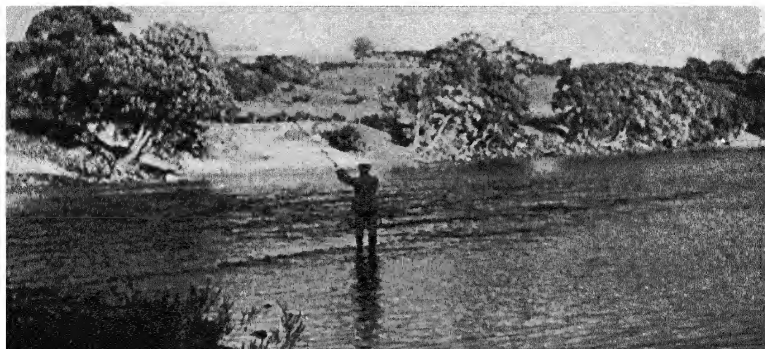
by an elliptic network of legal “flies”—each covering the whole area—the marvel is that any single salmon should ever open his mouth at all?

Should anyone doubt—as well they may—whether the above description be not overcoloured, they can reassure themselves by referring to certain proceedings that occurred shortly after this date at the Police-Court at Dumfries (see report in *The Field* of 26th November 1892). Thereat nine miners—many of whom bore the name Steel—were fined in the aggregate £36, *plus* law-costs, in respect of offences against the by-laws on this very September of 1892! Another man had six guineas and costs to pay for his illegal pleasures by the Esk, while two more escaped solely from a slight insufficiency of evidence! Besides these poachers from Esk and Liddel, other similar offenders were heavily fined at the same sessions for illegal fishing both in the Nith river and in the Solway off the Annan—a fairly good round-up for one sitting?

The state of affairs on these Border rivers is both deplorable and scandalous. The salmon by-laws in themselves are sound and sensible enough; but how can a single bailiff, or two or three, ensure respect for them over miles of scattered waters? A vast improvement would be assured could the bailiffs rely on the co-operation of the legitimate anglers who visit these rivers. But that, in solemn truth, is not the case—certainly not all round. There are those among them who themselves carry the lead cubes, clay-balls, or pistol-bullets in some secret pocket, and are not averse to use them should occasion serve. No one staying at Canonbie can fail to be struck, while listening to the piscatorial disquisitions around the coffee-room fire, with the marvellous importance attributed to the river-bed—its sub-aquatic geography is discussed and explained by the yard. Why? Because at certain irregular intervals are sunk large stones each fitted with vertical iron spikes—their object being, of course, to prevent drag-netting or “snatching” with weighted lines. No doubt any “tight line”—even a legal one—is instantly cut by contact with them; but that is no



"Above the Croys."



"On the Pier."



Gaffing a 20-pounder.

SALMON-FISHING AT HOUGHTY, OCTOBER 12, 1927.

sufficing reason for the almost universal curiosity displayed respecting these "engines." The real reason will be conjectured by my readers beyond a doubt.

We thoroughly enjoyed our spell on Esk and Liddel. Never have we learned more in a single week's experience; but never again—is it worth adding? have we since set foot on the banks of those lovely Border rivers.



OSPREY MOBBED BY CURLEWS, GULLS, AND ROOKS. Houxy, May 24, 1927.

CHAPTER XIII

SALMONOLOGY

[*A Purely Technical Subject.*]

A STORY OF TWO DISASTROUS WINTERS.

IN this Study of Wild-Life, the last word will ever remain unwrit; nor is there a group among our British Fauna to which that axiom applies with greater cogency than to the salmon-tribe. The Records of Salmonology in *The Borders and Beyond* represented half-a-lifetime of observation, and were so carefully elaborated that (I had hoped) no written words—certainly none of mine—could more accurately have portrayed the winter-lives of our salmon, with their processes of spawning. Yet each of the two seasons that have since elapsed have produced new conditions, unknown before! They have revealed new lights—in no single instance contradicting the previous conclusions, but rather adding fresh facts, as well as expanding and confirming the accuracy of points hitherto regarded as falling a trifle short of being “proven.”

When complex processes, often paradoxical and always long-drawn out, depend upon governing factors so unstable as our North British winters—when, moreover, these processes are carried out in an element adverse to our visual powers—there may obviously occur exceptional and phenomenal seasons calculated to upset preconceived opinions, and even to break Constitutional Laws! That is what happened in each of the two winters now under notice.

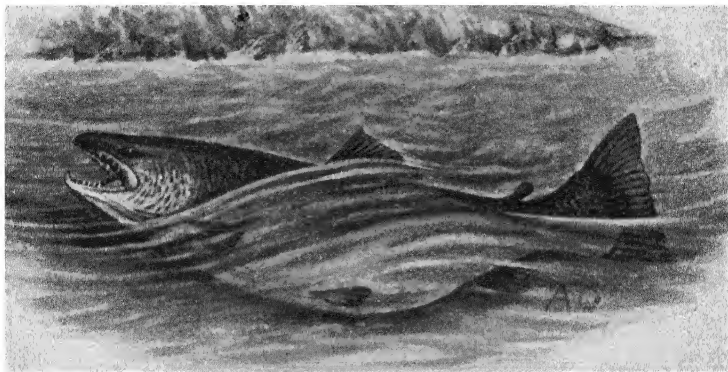
I.—THE EPIC OF THE WINTER OF 1924-5.

The autumn having been marked by a succession of floods, was favourable throughout to the run of salmon, and very

large numbers had reached the upper waters rather earlier than on an average. The spawning, which had been in full swing all December, offered no outstanding feature that need detain us here. Hence, to avoid all oblique oration and adhere rigidly to my text, I will pass direct to the main event—

The Deluge of the New Year.

That year of Grace, 1924, largely subject throughout to the powers of the Pluvian Deity, celebrated its demise by



HEN-SALMON ON THE REDD.

A gesture that, in the intervals of spawning, is characteristic rather than frequent.

a torrential rainfall over the whole mountainous watershed of North Tyne and Redewater. New Year's Eve witnessed a flood the fury of which had certainly not been equalled during a quarter of a century and probably for far longer. At Houxly the combined rivers overswept all normal barriers and surged in turbid tumult across the entire valley-floor—from 200 to 400 yards in breadth. Hill-streams, with their narrowed "water-gates," cannot expand laterally, as one sees photographs of, say the Thames, spreading over miles of low-lying environment. On the other hand, where the outlet is restricted, so, correspondingly, are floods apt to be more severe

and more dangerous. This day, the rush of waters bore along great trees, broken trunks and branches, whole acres of torn-away turf and mosses from the moors, haystacks and stray sheaves of corn—once a long procession—and not a few drowned sheep—a ruin of wreckage. On islanded knolls terrorised rabbits scurried to and fro, while belated water-hens sought perches on unwonted boughs.

But the lordly salmon—what of him? Poor exhausted creatures, caught thus at their weakest physiological moment (immediately after spawning), they were swept ashore in hundreds—overwhelmed and stranded on the flooded haughs by the violence of torrential waters—the whole riverside presently came to resemble a hard-fought battlefield.

New Year's dawn revealed yet higher floods and still more victims, but that afternoon the deluge began to abate. By the morrow's light it had fallen a good ten-feet, and from my windows an extraordinary spectacle was disclosed. Among the naked boughs of riverside trees that fringed the opposite bank, there hung strange objects—glistening objects—almost they might have been so many towels, inadvertently left there by summer bathers! They were, in fact, the carcasses of great salmon, left suspended like so many suicides! What a melancholy spectacle—Palladins, these, who but a brief month ago were glorying in their strength and exuberant vitality: now mere mournful evidence of Nature's ordered cruelty to her creatures. Ne'er had such a sight met my eyes before; yet we have classic authority that similar scenes were recorded ages ago, when Tiber burst his banks, presaging dire portents to mortals, when:—

“Piscium summo genus hæsit ulmo,
Nota quæ sedes fuerat columbis;
Et superjecto pavidæ natarunt
Æquore damæ.”—HORACE, Ode 2.

Translate *damæ* as “rabbits,” and the simile is perfect.

On the subsidence of the flood we examined its results and its victims. Great salmon in dozens lay strewn along

the shores and by-channels—some far out on the haughs, others caught up in bush or branch.

First to arrest attention was the *huge size* of some of these victims, bigger out of all proportion than anything previously seen, recorded, or suspected in North Tyne, where a salmon of 25 lb. weight represents about the limit of reasoned ambition, though a thirty-pounder may occur once in a lifetime. Here, however, we were face to face with avoirdupois undreamt before. Of two monsters in particular (and others appeared no less) a preliminary glance at the tape indicated a length of 50 inches apiece—a measurement which would correspond with an original weight, when fresh-run, of fully 50 lb.¹

More elaborate examination slightly reduced the first rough figures. Both the two huge salmon selected as examples were males, and their exact dimensions read as follows:—

No. 1—Length $48\frac{1}{2}$ inches, girth $22\frac{3}{4}$ inches, weight, as a kelt, 32 lb.

No. 2— „ 48 „ „ $23\frac{1}{4}$ „ „ „ 30 „

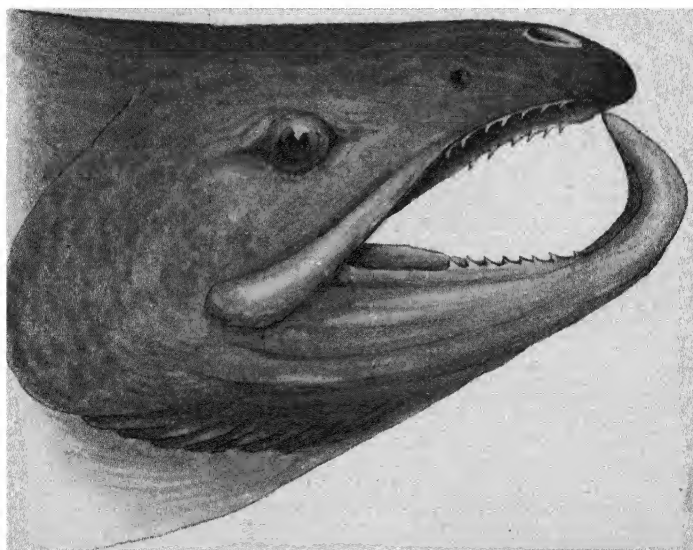
The heavier fish, and the *redder* of the two, was not yet fully spawned-out. No. 2, less red, was quite empty of milt. The index of their scales, by Professor Meek's report, showed that each had spent two years of river-life, followed by four (or possibly five) at sea.

Now either of these two big salmon, when fresh-run from sea, should have weighed—according to the standard scale—about 50 lb.; but the heaviest ever previously recorded from North Tyne only scaled 38 lb. The question at once suggests

¹ A note on “fifty-pound salmon” may appropriately be inserted. The words seem to slip so glibly from the lips that few, probably, realise how rarely a salmon reaches that weight. No more than *fifty*, all told, of such monsters have been authenticated as caught in Scotland and England, and to get even that small total we must search records back to A.D. 1750—that is, fifty fish in 176 years! Of these, however, the current century is credited with twenty-eight. My authority for this statement is a leading article in *The Field* of 14th January 1926. Even in our biggest salmon rivers, fifty-pounders must be regarded as merely exceptional monsters—in North Tyne altogether unthinkable!

itself—If fish of such dimensions habitually ascend North Tyne, how comes it that we anglers never encounter the giants while yet in the full pride of life?¹ A suggestion is put forward presently.

A peculiarity in the bigger of these two great kelts was that the gib (itself $2\frac{1}{2}$ inches long) completely protruded through the upper jaw, as shown in the sketches—a thing I have never seen before, though in other cases the anterior region of the skull had been penetrated, but leaving the outer skin intact. This latter occurs also with big bull-trout (*Salmo eriox*). The destruction wrought by this one flood must have run to

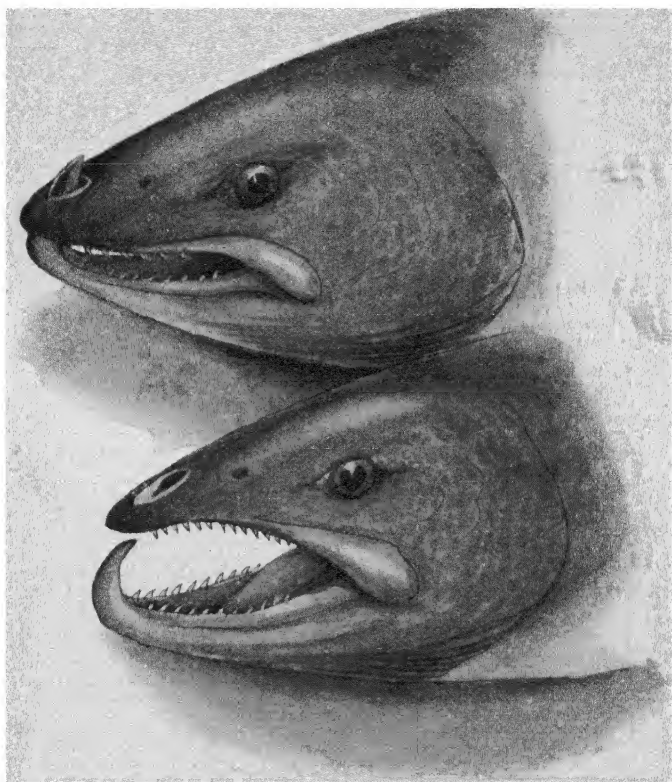


OLD MALE SALMON-KELT, WEIGHT 32 LB.—

hundreds, more probably thousands of victims. Everywhere along the riverside gulls and carrion-crows, with carnivorous water-hens, were gorging on the dead—spectacles in themselves rather gruesome, but as pictures charming. Here at Houxty,

¹ Among the salmon-kelts landed at Houxty during the following spring, one female fish measured 48 inches in length, the previous maximum (see *The Borders and Beyond*, p. 321) being $44\frac{1}{2}$ inches.

stuck in the willows and alders that fringe Gold-island stream (where the river takes a right-angled turn), we counted eleven great carcasses within fifty or sixty yards. And among these



—SHOWING GIB COMPLETELY PENETRATING FRONTAL BONE OF SKULL.

Houxyty, January 3, 1925.

eleven was one—truly a physiological paradox at the New Year?—

A Spring-Salmon fresh from Sea in Mid-winter.

This anachronism was a silver-bright female of 15 lb., as perfect in condition as though the month were May, instead

of January the third.¹ Her ova were quite rudimentary, the eggs no bigger than pin-heads, and the two long egg-sacs weighed together only $2\frac{1}{2}$ oz. Compare this with the spawn of another hen-salmon of similar weight (16 lb.) caught on the 28th of October preceding. Her eggs were bigger than peas, and scaled $3\frac{3}{4}$ lb., or nearly a quarter of the fish's total weight!

[A third comparison is also instructive. In a hen-salmon of 19 lb., caught on 3rd June, the ovaries just exceeded 4 oz.]

This New Year's salmon was the victim, primarily, of what I have elsewhere termed "sea-satiety": secondly, of a flood that had proved too violent even for her unexhausted strength. During that month of January (1925), we observed other salmon jumping in the strongest streams. These could only be new-run "spring-fish"; but the rigour of the Law forbade the fact being put to the proof.

II.—A SALMON YARN WITH A (?) PROBLEM.

(POSSIBLY INTERLINKING WITH INCIDENTS ABOVE RECORDED.)

Hardly had the salmon-fishing closed than, in the early days of November 1924, we found, lying dead, one of the biggest salmon I had then seen in North Tynec. It was a male, scaling as recovered nearly 30 lb., though its dimensions pointed to a heavier weight during life.

Now there is nothing unusual in finding salmon dead immediately *after* the spawning-season, especially big males—it is, in fact, a commonplace occurrence in mid-winter. But this was early autumn, and that a huge cock-salmon such as this should thus have come to an untimely end, while still enjoying that full vigour which *precedes* the reproductive function, defied explanation. Never before had we seen a parallel case.

There was no visible injury or external evidence to afford a clue to the cause of death: so I sent the carcass to Professor Meek, who kindly undertook an autopsy and here is his

¹ Though above referred to as anachronous, yet these facts precisely accord with the anomalous life-history of *Salmo salar*, as set out in *The Borders and Beyond*, pp. 271 *et passim*.

verdict:—"There was, as you remark, no external injury; but *internally* the poor fish was in a very bad way. . . . Inflammation had involved peritoncum, pericardium, spleen, and liver: while the heart was surrounded by blood-clots. The cause of this I do not know."

Well, I am about to venture upon a bold and highly hypothetical reason *W//Y* that salmon's heart should thus be encumbered with extravasated blood—a reason which our learned Professor could not possibly either have known or anticipated. My suggestion is that it was a case of "Broken Heart"!

Now a short time previously, in Gold-island stream hard by, I had had a tussle with a salmon the like of which, for sheer savage strength and ferocity, I had never before experienced—nor wish to again. Though I have killed hundreds of salmon, big and little, both in England and in Norway, yet the memory of that evening's fight stands out as a thing apart—almost a nightmare. The reader shall not be afflicted with details of an encounter perhaps too oft described—I have been so guilty myself, but that was in earlier days. It will suffice here to say that this particular duel ended in our defeat. The salmon was the victor; but it is conceivable to conjecture that his hard-earned victory may only have been gained at a vital cost? Our own hearts as, in solemn silence, we surveyed those wastes of weltering waters—"the scene, where just before the beast had been"—were sad enough, *almost* broken. But, at any rate, they were not "extravasated with clotted blood"—a result of the fight which, I suggest, *may* have befallen the victor, and proved the eventual cause of the death (otherwise inexplicable) of that big salmon which initiated this excursion into the unknown. That forms the ratio of my wild conjecture.

Whether our conqueror on that autumn evening was the *identical* salmon subsequently "found dead"—of a broken heart?—or otherwise, falls into the category of things not provable, however circumstantially probable. But alternatively, as the lawyers phrase it, it remains to note—what we did not know at the time (nor for three months afterwards)—that North

Tyne during that autumn of 1924 had been the goal of sundry immense salmon—say, possible fifty-pounders, as above recorded. Hence it becomes equally possible that our defeat may have been at the hands (or fins) of one of these adventitious monsters.

III.—THE CATASTROPHE OF 1925-6.

Spawning prevented by Ice.

Strange that two seasons of such diametrically opposite types should have followed consecutively; but stranger far that both should have occurred on the morrow of my publishing a lifelong study of the subject—based, say, upon forty preceding seasons—but which neither included nor anticipated conditions such as either of those two now under review! The moral emphasises the risk of writing on complex subjects without a maximum of field-experience and acquired knowledge. All the more does it gratify to find that my chapters in *The Borders and Beyond* have withstood the unexpected test.

Again to go straight to the crucial point. Only seven days had elapsed after the autumn fishing had closed, and before the salmon had had time to reach their spawning-quarters in the burns and headwaters when—to wit, on 7th November—winter set in with a prolonged severity that precluded all possibility of their spawning at all; while arctic conditions continued to prevail throughout the remainder of the year. Then, after a spell of milder weather early in January—too short for the completion of the reproductive function—a renewed rigour of frost and snow closed the waters during the whole period that remained available. At the crucial moment, Nature had slammed the portals in their faces!

To describe the spawning-season of 1925-6 as a total blank would perhaps be an overstatement: for a certain minute minority of those belated salmon did essay the attempt—especially during those half-dozen milder days in January; but even those few, we observed, did so in a markedly listless and lethargic manner as compared with the vigorous performances of normal seasons. Then, within less than a week, the streams

were once more paralysed in the iron grip of frost and remained so until late in February. So severe was the intensity of frost that when at length the thaw *did* set in, it lifted the whole ice-bound shingle bodily from its bed and—together with any ova it might contain—carried all away in common ruin. There were cavities created in Houxy burn as though a bomb had fallen therein.

Such briefly outlines the essential features in this spawning-season of 1925-6. In the whole water-area within my survey the function had failed entirely: yet, farther up the river, a few salmon must have had better luck, since in February a sparse sprinkling of kelts appeared. For the purposes of this survey, we may, nevertheless, regard 1925-6 as an *Annus Non*.

First, there arises the question—what became of all these shoals of salmon which had arrived here, ripe for spawning, say in October, immediately antecedent to the “glacial epoch”? At that period the ova of many a hen-salmon weighed nearly a quarter of her entire avoirdupois. Thus, of two that we weighed late in October, of 16 lb. and 18 lb. respectively, the ova scaled $3\frac{1}{2}$ lb. in each. At the critical moment, ice precluded all opportunity to deposit that mass of spawn: yet it would surely appear contrary to Nature’s economy that these unfortunates should be compelled to pass the entire winter so burdened? The sequel goes to show that some, at least, did so suffer. A single glance at Mr Riddell’s drawing at p. 176 will demonstrate that *nothing* could be observed beneath those glacial masses. For two months, observation was totally ice-blocked.

So soon, however, as salmon-fishing re-opened on 1st February, something like a flood of fresh light flashed upon darkened horizons—or, if that be too strong a figure, remember that we are here “beyond the ranges” in Wild Nature; in face of something quite new, of a combination of effects that had never before occurred—or, if they had occurred had never before been observed and described, which for our purpose is synonymous.

From the opening day the Border rivers—especially Tweed—proved to be full not only of spring-salmon (which is nothing remarkable) but also of *red* “autumn-fish” still unspawned,

and in precisely the same condition as those we had lost sight of in the previous October. They were, in short, just the type of salmon which one captures, or expects to capture, in autumn, but which seem strangely anachronous in spring. Almost it looked as if one might safely assume that these *red fish* of February and March 1926 were the identical individuals which had arrived, say six months earlier, but which (being prevented from spawning by ice) had passed the whole winter unspawned.

[The presence of a minute proportion of these *red* autumn-salmon during the opening weeks of the angling-season is not unusual. In most years *a few* occur, but never otherwise than merely casual exceptions, the existence of which I had previously attributed (probably, to that extent, correctly) to the influence and varying exigencies of "sea-satiety"—see *The Borders and Beyond*, p. 279.]

During the spring of 1926 these autumn salmon were no mere casual or accidental stragglers. On the contrary, they were positively abundant, and their very numbers obviously constituted a different proposition. In such quantities, they were as anachronous as mushrooms would be in March or butterflies in December. Whether or not they were the identical fish which had arrived the previous autumn—at least the final fate of those unfortunates remains unknown—in the clouds. An exceptional climacteric had overthrown and disorganised the whole fabric of their normal lives. Had the Bounty of Nature retained no remedy in reserve? No answer is forthcoming—at least as regards North Tyne.¹

The Tweed.—As a single illustration of the relative numbers of either class on Tweed (and incidentally of their respective weights) Colonel T. G. Taylor recorded in the *Field* his total take for the first week of February 1926 at Hendersyde, as 45 spring-salmon averaging 8 lb. apiece; while in those six days no fewer than 23 autumn-salmon were landed which would have averaged about 20 lb. apiece

¹ Since writing the above, we found in April 1927 at least three of these red "autumn-fish" lying dead, and we also found some in the preceding April. They are at once distinguished from kelts by their flesh being deep red. All, of course, were unspawned.

In reply to a letter of mine asking for further details Colonel Taylor expressed the opinion (for which he gave specific reasons) that the autumn-fish, on finding their spawning-grounds closed against them by ice, had temporarily returned to the sea, and were therefore taken on a *second* "run" to fresh water. He wrote from Hendersyde Park, Kelso, on 14th March:—"Many had *sea-lice* on, showing that it was a genuine case of a late run of ordinary autumn-fish. I actually saw them running up the cauld at Sprouston Dubb. Fully three-quarters of these autumn fish (and we landed 57 during February) were of the same quality as August fish in North Tyne or early October fish on Tweed. I attribute their presence in such large numbers to the very hard winter. Tweed was frozen in November and remained frozen till January. There was no open water from 5th November till 5th January. I think the fish went right back to sea and only returned from the middle of January onwards." The letter adds:—"The ultimate test of a spring-fish is the size and position of the spawn when cut open. It is the only conclusive test that I know of. Another fact is that out of 200 spring-fish, only one is a male."

The short river-transit from Kelso to the sea—no more than thirty miles of unobstructed waterway—would have involved no difficulty to the ice-blockaded salmon should they have elected to return to salt water, as these apparently did; but the case of those which had already reached the upper waters of Tweed (and equally those in North Tyne) differed essentially. They were blocked-in both above and below. Escape was impossible. The ultimate fate of these marooned salmon in either river remains a mystery. All that can be safely said is that after April they were no more seen.

Prophecy is usually profitless. It is, however, hardly prophecy, but rather a rational deduction from the above sequence of events, to predict that this loss of an entire year's increase will be reflected in a corresponding season of scarcity a few years hence. The most severe results will probably be experienced in that of 1930; but both the preceding and also the following seasons will also suffer, though in less degree.

Besides these red autumn-salmon, we also caught at Houxty both bull-trout (*Salmo eriox*) and sea-trout (*S. trutta*), bright-coloured as though new-run from sea, yet all unspawned. The condition of their ovaries, nevertheless, presented certain curious secondary phenomena which, however, are totally beyond my power to diagnose or explain.

One other sequel of this glacial winter deserves record. Never once during the spring of 1926 did we see a single hatch of March-browns—an almost daily spectacle in ordinary seasons.

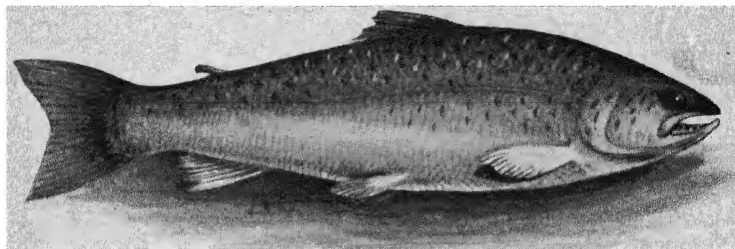
IV.—AN UNRECORDED HABIT IN *SALMO SALAR*.

While fishing the "clear-water worm" on a hot July day during the long dry summer of 1925, a surprising apparition caught our eyes. In the shallow rapid, only a few yards above, first the tail, then the back-fin of a great salmon broke the surface as the fish swayed to and fro in a strong stream barely deep enough to cover his bulk. At the time, owing to prolonged drought, the main salmon-pools had been reduced to very low levels, almost currentless; and we attributed the phenomenon to the fish being, as it were, half-asphyxiated by lack of oxygen, and therefore, in semi-desperation, seeking the aerated rush of the rapids. Thus we regarded the incident as purely exceptional: yet on several subsequent occasions our friend held his station—always (luckily for our tackle) despising vermicular temptation.

The following summer, though there had been no drought, witnessed the singular habit renewed on considerably larger scale. A sequence of small floods and spates had brought up quite an exceptional run of salmon; so that, by midsummer, hardly a pool remained untenanted. In mid-July, the river was running crystal-clear and at lowest summer-level. A week earlier, however, we had had what the newspapers called a "heat-wave," the shade-temperature rising well over 80° Fahr.—indeed at Hexham, only twelve miles away, it was stated that 90° had been registered. Apparently this heat-wave precipitated in the salmon an effect analogous to that of the prolonged

drought of the preceding summer: for quite a number took to the shallow rapids.

Thus on 16th July, in rushing rapids, strong but barely half-knee deep, I twice within two minutes all but *stepped upon* salmon, neither of which moved till I had passed above—then raced away down-stream with a startling splash at my heels! A few yards above, surprised (mutually) a much heavier salmon, which dashed out of a bit of a hollow run, no bigger than a sponge-bath, within a yard of my toes and made off upstream. A singular spectacle this big beast presented, violently threading a sinuous course amidst rocks and boulders that strewed the



SEA-TROUT, $2\frac{1}{2}$ lb. Length, $18\frac{1}{2}$ inches; girth, 10 inches. Houxty, July 18.

river's bed, while volumes of spray flew up as from a Destroyer at full speed. The terrific exertion presently exhausted his strength and he lay inert athwart the stream 100 yards above. He made another gallant effort as we approached; but the water grew shallower, the rocks more closely set, and escape became impossible. This was a fine fresh-run salmon of 16 lb., still carrying some sea-lice. It is doubtful if his like has ever been taken *by hand* before? Admittedly I felt some doubts as to the legality of the proceeding, but no law-giver ever contemplated such contingency.

Many other instances of finding salmon on these shallow torrents occurred: but that such habit is entirely new is demonstrated by the fact that, summer after summer, I habitually fish the whole of these torrents for trout; yet never before had either seen or heard of a salmon being found therein.

LIFE-HISTORY OF THE SALMON.

In *The Borders and Beyond* I expressed a doubt, not that the salmon habitually remains a celibate sea-rover during several of his earlier years, but that the evidence of that fact (as deduced from "scale-reading") did not amount to firm proof. It is therefore right frankly to admit that the cumulative observations of three more years do go to demonstrate that that strangely prolonged celibacy appears an established feature in the life-habits of *Salmo salar*—that is, that salmon may remain at sea for three, four, or even more years ere the first impulse of reproductive instinct urges a return to the natal stream.¹ That doubted phenomenon I now accept.

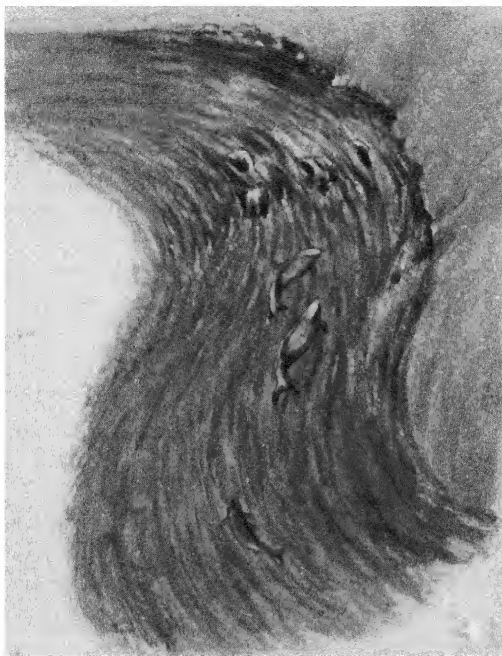
Similarly the weight of evidence favours a belief that few male salmon survive to perform a second season's spawning; whereas the females certainly do so—frequently twice, sometimes thrice, or even oftener; although they may already have attained their maximum size.

The above habits—equally with the salmon's exclusively marine feeding (in other words, that he needs no food while in fresh water, as was first pointed out in *Wild Norway* thirty years ago), with other cryptic phenomena in his psychology, are so perplexing and so far divergent from Nature's wonted Rules of Life, that no sort of apology is needed for having entertained preliminary doubts. In days when "theory" runs rather rampant and the ability to formulate fresh ones ranks almost as a fine art, it specially behoves to use every care in sifting evidence and demanding the most positive proofs ere any proposition, however fascinating, is granted a permanent niche in our creed.

The diagram on p. 183 has a double significance. It represents a hen-salmon which, having failed to find a mate, is content to

¹ So very little is known of salmon during their sea-sojourn that any fresh evidence is worth mention. Mr George Bolam tells me that during his voyage to Lapland in May 1924, he saw salmon leaping on the Dogger Bank on the 25th of that month. Personally the Author has crossed the North Sea more than forty times without the luck of witnessing such a phenomenon.

spawn immediately below a mated pair, relying on her own ova being fertilised by the wash-away milt from her neighbours above. The incident tends to show how hybridisation may thus occur: yet such a result is rare. In North Tyne the



"CRUMBS THAT FALL."

four species of Salmonidæ (*salar*, *eriox*, *trutta*, *fario*) keep as clean-cut as do grouse, blackgame, partridge, and pheasant: yet at rare intervals one lands an individual fish which it is impossible definitely to assign to either of the quartette. That individual can only be a hybrid. Among the game-birds such cases are even rarer, though they do occur.

CHAPTER XIV

FLIGHT

I—SPEED.

ALL estimates of the speed attained by birds in flight agree in one particular—that is, in their divergence! In itself, the divergence is speechful; yet in no sense is it surprising since a reliable criterion on which a reasoned judgment may be based still *se fait désirer*. Such estimates become, therefore, more or less synonymous with speculation, and the difficulty is accentuated by some confusion of thought as between actual speed and relative rate of speed. To cover 100 miles in an hour is one thing; to move at the rate of 100 miles an hour (or a minute!)—perhaps for only a few minutes—is a different proposition. Game-birds, for example, are capable of a tremendous velocity for quite short distances, but have no endurance. Wildfowl, on the other hand, while possessed of equal speed, are able to maintain it over great distances. There are birds that would rank as first favourites at the mile . . . or at five miles . . . others at 100 miles; yet would be “left standing” on the 100-yard course. In simple fact, we are all in the dark till some reliable method of measuring speed shall be discovered.

In the *Ibis* a few years ago a table of the comparative speed of several well-known species was given by a thoroughly qualified ornithologist who will, I am sure, forgive my discussing, and even criticising his figures. Colonel Meinertzhagen (whom I had met in British East-Africa in 1904) gives the swift first place at 68 miles an hour, ducks coming next at 59, geese at 55, the swallow at only 37. No doubt the swift may occasionally dawdle across the Heavens when dawdling suits its convenience or exigencies; but it surely seems incredible

that the swiftest of created "Sprinters of the air" should be outpaced nearly treble by mechanically propelled automobiles on the earth? The present speed of the latter exceeds 200 miles an hour, while aeroplanes may even far surpass that.

For years past I have tried to gauge the speed of the swifts which nest beneath my caves — not during their ordinary hawking operations (though these are fast enough), but while revelling in those empassioned "joy-flights" which old and young habitually undertake together—as it were, an aerial



steeplechase—so soon as the broods are strong on the wing. One striking point in these various calculations was the nearness with which they mostly approximated to each other. The great majority gave an average pace over an oval course of 350 to 400 yards' circuit, that only varied as between 4 and

4½ seconds in time. Roundly, that works out at the rate of 159 miles an hour—or more than double the estimate in the *Ibis*. Quite conceivably there may be some fatal flaw, for mathematics was never my strong point.



In Spain we have made innumerable calculations of

the speed of the huge griffon vultures which inhabit the crags immediately beneath our castle of Arcos, and which every morning treat us to superb exhibitions of aviation as they circle, soar, and sail by, often within rod's length, or float "wing-wide upon the air" past our hanging balcony. While moving thus leisurely, their shadows, we found, passed by lines

of olive-trees planted twenty yards apart at an average of one second, which works out at 40 miles as their minimum speed, when going "dead-slow." These morning manoeuvres might last half-an-hour or more, the vultures revelling in their mastery of the air and superb steerage-control; but usually rising higher and higher. Sometimes, having attained the desired altitude, certain leaders—perhaps "on information received"—would strike out a bee-line in one direction or another; and then, within 18 to 20 seconds (timed by watch), the whole crowd, huge as vultures are, would have vanished beyond the limits of human vision. At what speed had they travelled? At first sight the answer may appear to involve a simple sum in Rule-of-Three. Second thoughts go to show that some of the factors are obscure. For who can state at what precise distance an object measuring ten feet across becomes invisible to average eyesight? Visibility varies infinitely, and gunnery-experts tell me that the normal tests relied on in range-finding would not here apply. But if we may assume, as the roughest of rough estimates, that the vanquishing point would be approximately one mile, and that that distance is covered in 20 timed seconds, we get a speed of three miles per minute, or equal to 180 miles in the hour. By comparison with generally accepted standards in regard to bird-flight, such a result seems rather staggering: perhaps we had better leave it there. It may be that we all have something yet to learn.

What maximum speed can grouse attain as they cross a recognised danger-zone like a line of butts—given every advantage of a favouring wind and the fall of the hill? If the best that driven grouse can do is a mere 60 miles an hour, some of our crack shots, I fancy, would prefer a crossbow—or a catapult—to the modern breech-loader? Often, after missing handsomely with both barrels, I have personally estimated their speed at . . . but I won't further entangle myself with those tiresome figures.

The maximum speed of game-birds has never, I imagine, been calculated at more than 50 or 60 miles—considerably slower than an ordinary express-train. It may be correct; I am

not disputing it; but when one sees a slow-flapping rook easily keeping pace with the "Flying Scotsman"—or passing it at will—it seems as though a different criterion would apply to the lightning flash wherewith a driven grouse passes a given point. The progress of the rook may by comparison be



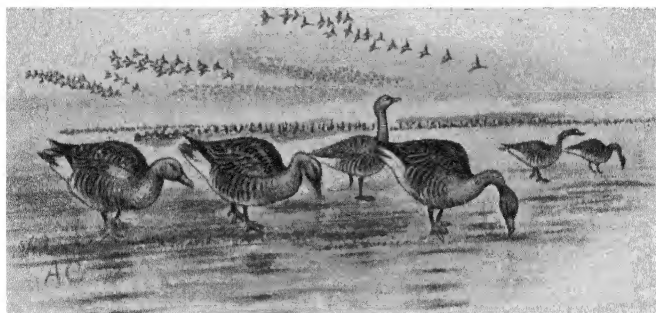
GRIFFON VULTURE.

Wing-drying after a thunderstorm; San Cristobal, March 25, 1910.

likened to a funeral procession. Surely sharp-winged wildfowl such as widgeon or teal, or "globe-spanners" of the build of plovers, would "leave standing" the fastest train that ever ran?

Perhaps with ducks I may get on to slightly firmer ground—at least in one specific case. In Spain, at the far inland Lagunas de Daimiel in La Mancha—the head-waters of the great river Guadiana—where very large totals of ducks are

regularly shot (as described in *Unexplored Spain*), it is notorious that a large proportion of the incoming ducks at "morning flight" are cropful of rice. Now the nearest rice-fields are at Valencia, distant 180 miles on the Mediterranean coast. For the double journey this involves a flight of 360 miles. Hence if ducks travel no faster than some 50 miles an hour, it follows that seven hours each night would be spent on the wing. It may be so; but I cannot accept such conclusion since it belies all principles of economics. Such measure of physical exertion in relation to its concrete reward is wholly disproportionate.



GEESE AND DUCKS IN THE SPANISH MARISMA.

Nature necessarily imposes some equipoise, some ratio between effort and result. Hence—(since, as premised, this disquisition is purely speculative)—I will boldly venture to put the transit at *one hour* each way, out and home; that is 180 miles per hour, nor would it surprise me if the speed were greater.

Both wigeon and pintail (with many other wildfowl) emanate chiefly from north of the Arctic Circle and in winter pass south to the Equator—a distance of, say 5000 miles straight. At the speed they are credited with, the transit would occupy nearly a week. Is that probable? The annual migrations among the tribe that I christened "Globe-spanners" (*Limicolæ*) covers each spring and each autumn a range of 10,000 to 12,000 miles—or, say a minimum aggregate of 20,000 miles each year.¹ We

¹ See *The Borders and Beyond*, p. 62, *et passim*.

have no precise data on which to gauge the time occupied in that immense transit, but it seems certainly incompatible with any such low rate of travel as 50 or 60 miles—or even 150 miles an hour. To me it is incredible that world-wanderers such as these, expressly built for speed, should be limited to such humble velocities.

[Incidentally and in reference to the comparative speed of geese and ducks, it was an every-day experience in our marismas of the Guadalquivir to observe that when vast mobs of both kinds happened to pass simultaneously—(each denomination independently)—the geese, despite their apparently more leisurely flight, easily had the speed of their smaller neighbours, though the latter used many-fold more wing-revolutions. All ponderous birds such, for instance, as wild swans and geese, the great bustard and capercaillie, even the blackcock, fly faster than they appear to do.¹]

It is rather the momentum, in these heavier birds—the *ratio ruentis acervi*—than the size, that deceives eye-judgment in gauging their relative speed. Thus in Spain, it is a not uncommon experience that good and safe shots, when first tackling the great bustard, are apt to fail at the easiest chances. As the huge birds (30 lb. weight) come sailing in on slowly-waving wings, it may appear impossible to miss them. As a matter of fact they are travelling at high speed and require as full a “forward allowance” as smaller game which is visibly moving *all out*. Our Spanish keepers will try to console with the explanation, “*Se le lleno el ojo de carne*”—their huge bulk filled the eye with meat! Similarly, it is not unknown on the moors at home that an old blackcock, with his deliberate wing-action, occasionally escapes through the same eye-deceiving flight. In the opposite extreme, birds of low specific gravity—that is, light-built types with a relatively big wing-area (such as herons and harriers)—possess no turn of speed at all. Weight in this regard—*compact* weight (specific gravity)—counts, as the lawyers phrase it, as “of the essence of the question.”

¹ In the *Field* of 5th May 1927, it is recorded that an aeroplane travelling at 90 miles per hour overtook geese which were *presumed* to be going “all out” at 70 miles an hour; but the assumption is unproven.

Even Solomon could not tell "the way of an eagle in the air," and which of us dare assess the velocity of a peregrine in those final seconds when the falcon outflies terrified teal—themselves sprinting at x^3 (?) miles per minute? Such is the power of impact that the decapitated duck rebounds *vertically*

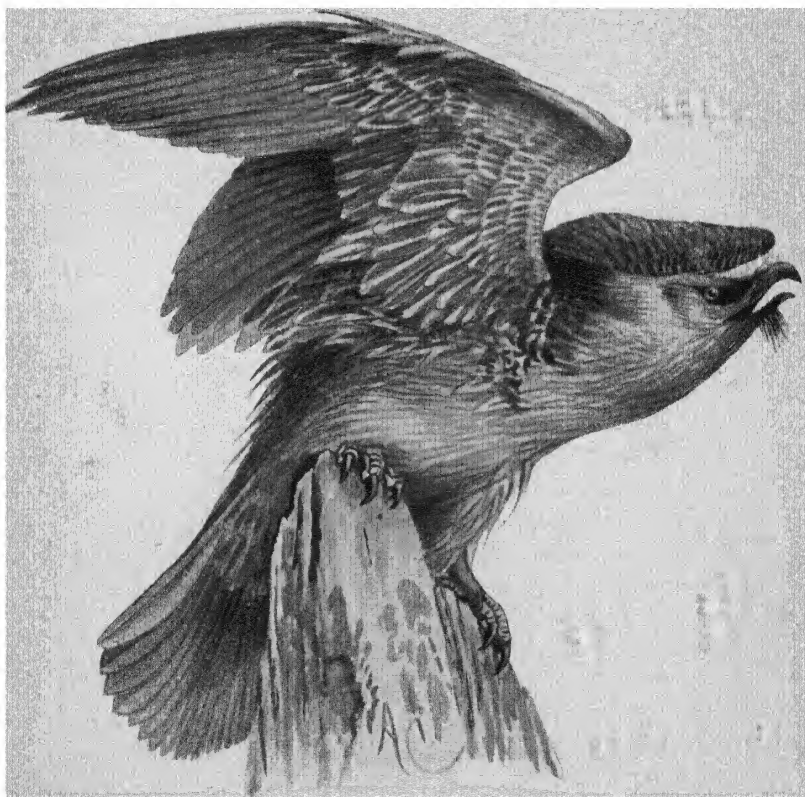


MARSH-HARRIER (Adult Male), El Juncal, Jerez, February 8, 1908.

from the surface, while its head falls separately, thirty yards ahead.¹ The stoop of an eagle sometimes seems by comparison easy-going, as though the great raptor recognised that his victim was terrorised or hypnotised. Specially is this the case when the quarry is a hare, or with birds of less speed and spirit,

¹ By a mathematical calculation far too elaborate for me to follow, Mr Riddell works out the speed of a falcon's stoop at 204 feet per second, or at the rate of 139 miles an hour.

such as spoonbill and the smaller herons. At the same time, an eagle's onset in pursuit of fast-flying game—say bustard, greater or less, guinea-fowl, or geese—is fast and furious, a sight to remember. (See sketches in *Unexplored Spain*, p. 258; also *On Safari*, pp. 211-2 and p. 224.)



LAMMERGEIER, Sierra Bermeja, March 31, 1896.

The mighty lammergeier can soar and glide by the hour, and equally on ascending as on descending plane, without shifting a pinion or displaying the slightest visible exertion. One in particular I watched in the Sierra Bermeja, passing horizontally far below. Quietly shifting course, the great bird

started to rise, and in one long steady glide overtopped the opposite mountain-side, certainly 1000 feet, on absolutely rigid wing and without a sign of power being exerted. Neither vulture nor eagle is capable of this; their gliding ascent would need to be implemented by powerful intermittent wing-strokes at intervals. Thus does this weird verisimilitude to some flying Dragon of prehistoric age mock the discoveries of Sir Isaac Newton and set at naught the Laws of Gravity—as we understand them.

Again, take the case of an 18-knot Ocean liner ploughing the seas at full steam ahead; yet the attendant gulls patiently hover across her counter, keeping equal pace with no more visible effort than if they were standing still. Should a bucketful of larine luxuries be thrown overboard, the gulls stay behind to exploit the feast. Within brief minutes they are lost to sight—miles astern. Yet no sooner is that food consumed than at once the gulls resume their wonted stance, overtaking the ship at thrice her speed, though gulls are not built for speed. On a recent tempestuous homeward voyage aboard the Orient liner *Ormuz*, we had a full northerly gale right in our teeth—"Force 8," which I understand to represent a wind-speed of about 45 miles per hour, plus that of the ship: yet it produced no visible effect on the gulls. Their speed through the air must then have worked out at $45 + 16 = 61$ miles per hour during the livelong day. Crossing Biscay, wind shifted to south-west with hurricane force and very heavy seas, delaying our ship (despite her 10,000 horse-power) some fifteen hours. Yet the gulls stuck sedately to us right across to Plymouth!

The function of flight, equally with its speed, varies infinitely and individually. There are bird-types such as our tiny British warblers which, during their three-months' summer sojourn with us, rarely use their wings for 100 yards on end; yet are capable each autumn of undertaking a 2000-mile journey to Africa—and another 2000 back in the spring! The golden-crested wren has a wing of only $2\frac{1}{4}$ inches, yet it habitually crosses the 400-mile North Sea in millions. I have met them myself in

mid-ocean; and not only these mites of birds, but butterflies also, and moths, and dragon-flies!¹

Above, it was stated that while game-birds are possessed of great speed for short distances, they have no endurance, and Spain affords a striking proof of that fact.

In the historic Coto Doñana our method of out-manœuvring partridges (redlegs) consisted in pushing the game forward over wide areas of scrub and brushwood towards the shores of the *marisma* which, in winter, resembles an inland sea. The running partridges, at last, finding themselves "between the Devil and the Deep," had no line of escape save by wheeling back *high* over the advancing line of guns, beaters, and keepers. The latter being mounted were, of course, conspicuously visible; and in presence of recognised danger the enclosed gam. made stupendous efforts to climb ever higher and higher, so as to pass out *above* the reach of the guns. So great were those efforts that those partridge which got through the ring were incapable of further flight that day, and, on the next beat, those that happened to be found could be picked up by hand, exhausted. Yet they could barely have covered a mile's distance after all.

Another scrap of circumstantial evidence. Long ago, on calm autumnal nights on the Northumbrian coast (in October-November), my brother Alfred and I used to hear the notes of fieldfares and redwings as they made the land between 10 and 11 P.M. Now assuming that they had left Norway about dusk (as we have on two occasions observed them to do ourselves), the 400-mile transit had occupied, say less than six hours—or, approximately, at the rate of 70 miles per hour, though the thrush-tribe like the gulls, are not specially built for speed.

[Since writing this chapter, we have the evidence of the International Air-plane trials at the Lido on 26th September 1927, and which were won by two British aviators. Though naturally proud that British fliers and British machines should take first place, that aspect does not directly concern us here. Our problem is—what is the maximum speed of flight? The

¹ Cf. last sentence of this chapter: also *Wild Norway*, Chap. XXI.

Lido course comprised seven traverses of a triangle, involving twenty sharp turns in a total distance of 218 miles. The official results are:—

	Distance.	Time.	Miles per hour.
(1) Flight-Lt. S. N. Webster . .	218 miles	46'·20 ²⁸ / ₁₀₀ "	281·49
(2) Flight-Lt. O. E. Worsley . .	218 „	47'·0 ⁷⁵ / ₁₀₀ "	273·6

Allowing for time lost in executing the twenty turns (two of the three being extremely acute), the effective speed was estimated by experts to exceed 300 miles per hour—probably about 320—had the course been straight instead of triangular.

Such speeds as these leave those of the bird-world—even at my maximum estimates—far, far in the rear !]

II.—HEIGHT.

The conditions and the happenings in that relatively thin film of atmospheric air which encompasses our Planet, are less precisely known than is any accessible spot on the earth's surface, however remote. Our astronomers can forecast the movements of the Heavenly bodies, though millions of miles away, in rigid schedules which are accurate within minutes. Yet of the circumstances prevalent within a mile or two, say in the space close overhead—the zone of the birds—we remain virtually ignorant. Hence exact knowledge of the altitudes attained by bird-flight remains as scanty and as nebulous as we have already suggested it to be in respect of the speed at which birds may fly.

Already the Conquest of the Air is in process of achievement and some little faint hints, vague as shadows, begin to lighten the darkness. They are, however, so far, little more than promises of the harvest that the future has in store. Writing thirty years ago in *Wild Norway*, I suggested that—vast as is the sum-total of migration (call it half the world's feathered inhabitants shifting their stations twice a year)—yet, comparatively speaking, not a sign of these gigantic operations is vouchsafed to human eye. No sign, that is, of the actual process as distinguished from mere evidence of its progress.

Every voyage at sea, in spring or autumn, some few belated stragglers, singly or in small groups, may seek the refuge of one's steamer. But such casual appearances amount to nothing. They represent mere jetsam and flotsam, lost wanderers that have fallen out of the ranks of migrating millions far above that are not seen. Their scant numbers bear absolutely no appreciable proportion to the vast sum-total passing beyond our view. They are interesting as indices of what is passing above, but that is all.

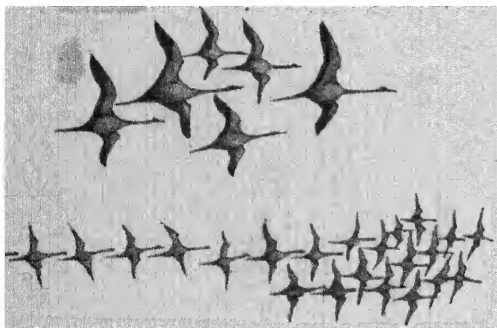
The swallows, willow-wrens, and other warblers that cross the Channel every April must mount up to a tangle of countless millions: yet no one sees them come: no one sees their arrival in full swing, even across such narrow waters—that is, I repeat, the process as apart from evidence of its progress. Such facts rather point to these vast aerial movements being performed at altitudes—and perhaps at speeds—that have not yet been fully realised. What was written in *Wild Norway* thirty years ago remains unshaken to-day; but such problems won't last unsolved for long!



The maximum elevation at which birds have been recorded by the Royal Air Force appears to be about 11,000 feet, a level which would not clear the Alps or the Pyrenees, or the Sierra Nevada in Spain. These birds happened to be rooks; ducks coming a bad second at 6500, golden plovers third at 6000 feet. I doubt, however, the value of all vague and casual observations. With the most supreme respect and admiration for our gallant aviators, one is bound to recognise that, as pioneers in a new and dangerous profession, their attention must needs be concentrated on technical matters far more vital than watching and identifying birds. Human aviation opens up a wholly new field in ornithology. But as yet it is a totally virgin

field, and the eventual work must fall to passengers rather than to pilots.

Only two pertinent points appear worth recording here. In Africa one may sweep the Heavens with binoculars and not a dot or speck be visible in all the immensity of space. But let a big animal be killed, and within five minutes—ere yet off-skinning has commenced—revolving shadows chase each other on the tawny veld around. Look up, and you see hordes of wheeling vultures descending expectant to the feast, where never one had been in sight just before. Their patrol is



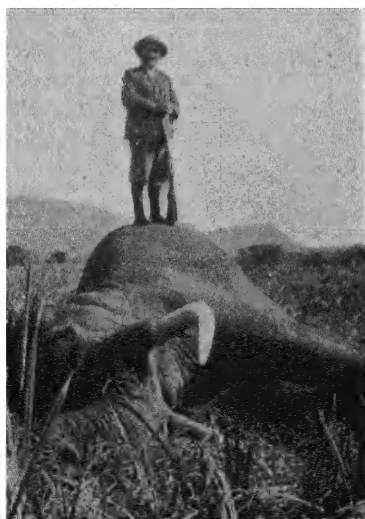
ubiquitous, but carried on far above the limits of human eyesight—though vultures spread ten feet of wing. Again, on a still day in Spain, one may hear afar the gaggling of geese or of flamingoes; or perhaps the trumpeting of cranes overhead falls faintly on

one's ear, though not a speck be discernible in the clear blue arc of Heaven. At what height are the unseen passing?

On one of these occasions (13th March 1904), *other* companies of both the latter species, *flying lower*, happened to come within the radius of our vision. First to appear were multitudes of cranes, winging direct out of Africa, pack succeeding pack and all in rigidly marshalled formation—V's and double V's, though the more distant files, being seen in profile, appeared more massed. Meeting the cranes in mid-air, there came countless skeins of flamingoes bound due south. These were also marshalled, but in chain-like lines, each individual following directly behind its "next ahead," and some of these strings looking like half-a-mile in length. Numerous as were the cranes, yet the flamingoes outnumbered them tenfold, and their procession was still in being when darkness closed the scene. One half this tumultuous spectacle we *saw*; the other

half we only *heard*. It was a beautiful and an instructive episode—which is the only excuse for naming it here.

In general sense, these rough observations suggest that both the speed of birds, and also possibly the heights at which they fly, may far overpass the limits commonly assigned. Unknown atmospheric conditions, moreover, at those greater elevations, may vastly facilitate migration—indeed, for short-winged types (such as goldcrests and warblers) long overseas flights—though we know they are accomplished—would otherwise appear impracticable. There remain imponderabilia in wild Nature.



"IMPONDERABILIA."

CHAPTER XV

THE SAFEGUARDING OF WILD-LIFE

THE necessity of extending some measure of Protection to British bird-life has recently impressed itself upon popular thought. Presumably its urgency grew more and more obvious in those districts where—under modern conditions of rapid transit—great cities are fast overflowing into what were purely rural areas. In the south, one reads of whole stretches of open country being invaded by the builder, and of secluded spots being adorned—or disfigured, according to the point-of-view—by a flood-tide of “Garden cities,” bungalows, suburban villas and the like. In a sense, that is all to the good, since human requirements must needs take precedence over all else. But it is equally a kindly and creditable sentiment that seeks, in these cases, to save some small refuges for the dispossessed of humbler creation. The danger ahead lies in that sentiment being misdirected—guided from heart rather than by the head.

The Author must frankly admit to having no personal knowledge whatever of this irruption of *Urbs in Rurem*, since no such manifestation has yet reached the solitude of the Borders—probably it never will¹—yet, none the less, has the safeguarding of Wild-life been to him an object of supreme interest and attraction all his life, as will presently appear.

An advantage that is accruing from the increase of popular interest in this subject has been that a broader and more intelligent view of its bearing, and of faunal conditions in general, is arising. Gradually that clearer perception is eliminating some of those deep-rooted fallacies and obsessions that

¹ So far as my observation goes, not a single dwelling-house has been built in the open country within many miles of my Northumbrian home within the last five-and-twenty or thirty years—probably far more.

in the past, have obstructed real progress. Opposing schools have kept preaching different gospels: both were probably honest in their convictions, but the result has been that wild words have supplanted humble reason.

One elementary point to be recognised (though usually overlooked) is that Great Britain is as plenteously stocked with wild creatures as any country in Europe—better, far, than most of them. It is true that wholesale drainage of fens and reclamation of waste land in the past—along with intensive cultivation on modern lines at present—have banished for ever many aboriginal types, aquatic and other. One may regret that fact, but 'posthumous tears avail naught. It is a chapter that is definitely closed and finished. But bear in mind that where man alters the physical character of the land, Nature adapts her Fauna to the new environment. Broad acres of cultivation import increased production and benefit to the human element; but sign the death-warrant to marsh-lovers such as bittern and black tern, ruffs and reeves, godwit and avocet. Neither marsh-harrier nor spoonbill have much use for corn-fields. They have gone. The change, nevertheless, involves no net loss—only an alteration. Banished fen-forms are promptly replaced by others of different habitat—say by swarming pheasants and partridge, land-rail instead of water-rail, and by land-birds in thousands—larks, pipits, buntings, chats and tits, warblers, nightjars, and the rest—where snipe, duck, and dunlin formerly reigned supreme. Human nature is ever apt to bewail losses as though the "lost lamented" had *once* been a cherished treasure: but remember that in those old days, when we *had* fens and fen-fowl, the chief concern was to capture the latter alive and to fatten them for the London market—at four guineas the dozen! In that epicurean sense the fen birds may indeed have been esteemed as "cherished treasures"!—but in no other.

Great Britain, as just stated, ranks among the richest of European lands in respect of the density of its Fauna. Why? Mainly, of course, by virtue of a geographic and insular situation—northerly (right opposite arctic Labrador), yet washed by a warm Gulf-Stream from the tropic—resulting in a variety of

economic conditions, ranging from bleak moorlands to smiling cultivation with its sheltering woods, coppices, and infinite mileage of hedgerows—note that no other European country

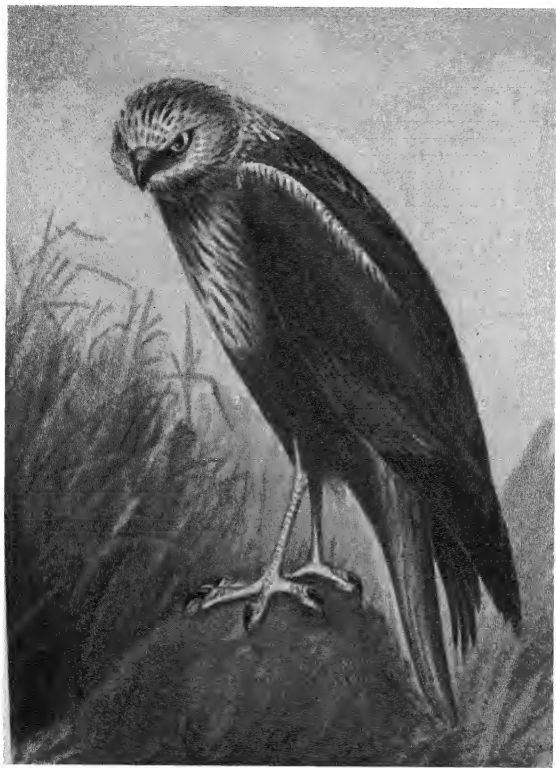


MARSH-HARRIER (*Circus aeruginosus*).

Young of the year. Shot in Spain in June 1883.

wots of "hedgerows" at all. Secondly, because this Island is virtually one gigantic game-preserve from end to end: and because the preservation of game imports nothing less than assuring sanctuary to the minor forms of life. The result may be merely incidental to the primary object: none the less is

it effective—not to say vital. Such a claim in the darker days of a few years ago would have excited howls of execration. For the game-preserved has ever been the pet ogre of fanatics,



MARSH-HARRIER.

Old male ; shot in Morocco, March 1872.

the gamekeeper a blood-thirsty savage whose chief function in life was to slaughter poor little hawks and owls, stoats and weasels, and other innocent Babes-in-the-Wood. That is one of the obsessions that are slowly disappearing in the clearer light of to-day. Still it is not dead : for only a few months ago,

I read a semi-hysterical denunciation of game-preservation as—
“An inane, selfish, and unnatural system that has subjected Britain to the tyranny of gamekeepers for a couple of centuries.”



MONTAGU'S HARRIER (*Circus cineraceus*).

Adult female. Spain, April 1891.

The volume quoted bears inherent evidence throughout of being the work of an accomplished ornithologist of the latest school—that which “learns less and less about more and more”: but the sentence cited demonstrates how short is the step from genuine and laudable enthusiasm to pure unsophisticated bigotry.

Game-preservation—meaning the maintenance of one class of creatures above their natural level—(even on the moderate scale that alone lies within the Author's experience)—necessarily



MONTAGU'S HARRIER.

Young of the year. Spain, June 1883.

involves holding the mischievous and predatory classes in check. A gardener must eradicate weeds, and a farmer is little apt to encourage tares among his wheat? It is a fanatical idea that a vast system, universal throughout this Island and affording both employment and rural amenities to millions, should be

overthrown in order to restore "prairie conditions" in a crowded country. But the subject is too childish to pursue.

Personally I hold no brief for gamekeepers in general. Undoubtedly there survive anachronous relics who still blindly regard all wild creatures outside the game-list as "best dead": but the relative proportion of these is an ever-decreasing quantity: nor is it reasonable to condemn a whole flock because of black sheep within the fold. The circumstance of having passed my life largely among gamekeepers, both at home and abroad, has left a definite impression that many an up-to-date Guardian of the preserves, alike in intelligent appreciation of those problems which fall within his charge and of the general inter-relationships in wild-life, is at least as qualified a judge as many of his word-spinning critics. They, too often, belong to a type which loves the alchemy of science, and preaches from this text or that with superb disregard of such trivialities as everyday facts. Unwittingly, these good folk darken counsel by words without wisdom, and perhaps illustrate Rudyard Kipling's aphorism, "They string a clamorous magic to fence their souls from thought." Thereat I leave that side of the question.¹

Up to a short fifty years ago—be it specially recalled—no British bird whatever (save game) enjoyed any legal protection at all. Whether they then needed universal protection by law is a legitimate question. At the same time it is obvious that, in the main, they had previously flourished without any: nor has any decided change consequent upon a half-century of Protection come under my personal notice.² One may read of this species or that having materially increased—such, let us hope, may be the actual case: but rarely is a census of

¹ Some of the above remarks may read as no more than truisms: but even truisms, when their salient outlines have been persistently blurred, may require re-statement.

² The woodcock, as elsewhere mentioned, forms an exception to this—perhaps the only notable instance in the North. But the woodcock is really a game-bird. The coast-breeding sea-fowl had already received much needed Protection under the modest little "Sea-birds" Act of 1869.

wild-life, though restricted to quite narrow limits, even remotely reliable and one fears that, too often, the wish is father to the thought. In bird-life, moreover, there exist tides, both ebb and flow, and these fluctuations are subject to Nature's Laws rather than to those of Man. Nor does it follow that either increase or decrease in given species imports any real change in their actual numbers; which, in most cases, may be merely due to some fractional variation in the range of their geographic distribution. Many such instances are specified in my books.

Action and reaction, however, being equal, the legal pendulum has since swung to the opposite extreme. We have witnessed an orgy of Legislation, mostly sentimental. Personally I have throughout doubted (and denounced) the wisdom of multiplying protective measures bristling with penalties and with nebulous "Schedules" that none could understand. I have questioned their being of real benefit to bird-life, and to-day those doubts are justified by the result—the melancholy result of fifty years of abortive legislation. In the wider spaces, moreover, the various Acts have always remained virtually a dead-letter and a legal fiction.

Parliament has been required—hustled, as it were—to arraign the entire feathered Creation—say 400 potential culprits at the Bar, and then proceed to pass separate judgments in detail on the merits, or demerits, of each individual. That is an inquisition into wild psychology which no Legislature on earth is qualified to undertake. Not Sisyphus himself was ever set on a more hopeless job! In a long Retrospect, one speaking example of the liability of Parliament to be thus "hustled" by doctrinaires is afforded by the egregious "Sandgrouse Protection Act" of 1888. Neither at the moment of its passing, nor during the forty years that have since elapsed, did there exist any sand-grouse at all in these islands—nor nearer than the Roof of Asia, 7,000 miles away. At the time, this simple fact was clearly pointed out by my late brother, Alfred Crawhall Chapman; but facts are unwelcome when Sentiment rules and "sob-stuff" rampages around. Hence a purely still-born Act still disfigures the British Statute-book. Yet two more of these bantlings have

been still-born during the two last Sessions of Parliament. One wonders, are there further follies still to follow?

Under such circumstances, it irresistibly provoked a smile within me to read in the *Times* (6th July 1927) a grave Parliamentary discussion turning on the point—"Would a policeman know the difference between a twite and a siskin?" [Answer, No! he wouldn't, nor would magistrates or sheriffs either: a quorum of experts would need attend each Petty Sessions.] A few days later, I read (without either surprise or smile) that the Parliamentary Committee, finding themselves hopelessly enmeshed and embogged, saw no resource but to abandon a chimerical undertaking—yet another "Wild-birds' Bill" was consigned to the waste-paper basket!

When, in quite a simple matter, failure succeeds failure during half-a-century, a mild injection of horse-sense might induce a suspicion that *something* may be drastically wrong in the diagnosis even of distinguished physicians? Secondly, that a spice of the said "horse-sense" may, after all, have permeated those humbler folk who, during equal period, have denounced the follies of that diagnosis?

A scheme of practical protection for wild birds is broadly outlined in my *Borders and Beyond*: but, should that prove too strong meat for the doctrinaires of to-day, in such case the suggestion of the *Scottish Society for the Protection of Wild Birds* may point a secondary alternative. Their scheme precisely reverses the methods hitherto pursued. Instead of "lumping" together the whole feathered crowd—400 all told (including the twite and the siskin)—and then dividing them into meticulous "Schedules" of varying merit, the Scottish Society adopt a more Procrustean style. Broadly stated, they propose to grant universal Protection to all birds equally: then to separate goats from sheep—that is, to exclude the relatively small proportion of detrimentals, *and* [the addition is my own] such as require no protection at all. The outstanding merit of the scheme is its simplicity; for the delinquents (under *both* heads) to be excluded under this plan would probably only amount

to a score or so out of the whole four hundred. How the proposal would work in practice needs a cast of mind more legal than mine to foresee. At least it could not fail to be an improvement upon the unwieldy edifice of topheavy devices—all half-baked—that for fifty years past legislators, with their doctrinaire advisers, have been alternately constructing and destroying, hatching or addling, with intervals of tinkering—a waste of time and temper sad to survey.

The Laws of Nature necessarily take precedence over those of Man; and it may surely be laid down as axiomatic:—

- (1) That superfluous laws—laws, that is, which manufacture and multiply fictitious crimes—are more mischievous than no laws at all.
- (2) That even ideal laws are useless unless equipped with corresponding power to enforce their provisions. Such power, in the wider spaces, does not run.

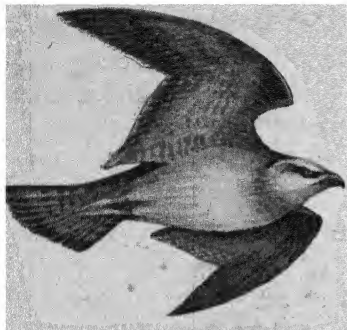
SANCTUARIES.

Alternatively, the establishment of Sanctuaries, whether by public or private initiative, may conceivably prove a more efficient safeguard for wild-life than any legal enactments. A strong point in their favour is that Sanctuaries would necessarily enlist a far broader and more sympathetic public interest: for, being a spontaneous growth, they must, *to succeed*, generate a genuine local enthusiasm in their objective.

The plan has certain clear advantages, some obvious, others obscure. Thus each Sanctuary would involve annual expense, and that I count among the advantages, since what costs naught is oft esteemed at a similar cypher! Besides, having once embarked on a costly venture, most practical folk would see to it that an equivalent return was assured? True, that places the matter on a lowly basis. The loftier result would be attained in fostering and inculcating that broader and more intelligent sympathy with wild-life that to-day is conspicuously lacking, or only exists on paper. Thus, by degrees, bird-protection under a popular ægis might develop into an automatic growth

rather than, as at present, a cold legal creation that interests none beyond a minute minority of fanatics.

As regards initial expense, this would be a mere trifle in



adapting any suitable site for the purpose—merely providing a few avian amenities. Great terraces of dressed stone, with iron hand-rails and sculptured eagles—or are they gargoyles?—such as those in Hyde Park, are totally inappropriate. They are more suited for a Mausoleum. No; legitimate expense would arise chiefly from the necessity of supervision, or

“watching.” For it would be essential to maintain a reasonable control of the Balance of Life—that is, if the Sanctuary is to fulfil its proper ideal, not only of providing secure refuge for the greatest variety of denizens, but also to form a nucleus the overflow from which might enrich a whole country-side. But an unguarded Sanctuary left absolutely to Nature would run riot the same as a neglected garden. Predatory and destructive elements must be held in rational check, or chaos would ensue. The rabbit, for example, if left to his own sweet ways, would speedily eat us out of house and home.



IN THE HOUGHTY SANCTUARY.

OSPREY, May 21, 1927.

HOUGHTY.—For more than five-and-twenty years the Author has maintained what is virtually a Sanctuary on practical lines around his home—providing both shelter and security,

with convenient *incunabula* in secluded spots. This includes engineering attractive bits of marsh and reed-fringed pools: enclosing derelict corners and cleughs, or ravines: besides planting-up such places with trees, shrubs, and berry-bearing bushes—in short, spreading temptations broadcast to induce the utmost possible variety of wild creatures to make their homes within it. We take, nevertheless, our due toll of whatever game—feathered, furred, or finned—that naturally frequents the ground: and maintain, moreover, a rough-and-ready balance



ROE DEER IN HOUGHTY SANCTUARY.

as between the strong and the weak—that is, the predatory tribes (excluding hawks and owls) are kept in check within rational limits.

The result is eloquent. Within this small inland area (twenty miles from the coast) my *Avifauna houghtiensis* now counts no fewer than 134 species—a total which amounts to rather over one-half of the entire feathered census of the two big counties of Northumberland and Durham taken together, and with 100 miles of sea-board—as enumerated by John Hancock in 1874. Of the above 134 species, 110 have been identified *ex fenestra*; or, in plain English, from the windows of my house. We count, in addition, 24 species of mammals, 10 of fish: while the catalogue of the minor forms of life remains unenumerated,

simply because I do not know them all by name. Such a result testifies to the value of "Sanctuary" even on so small a scale, and in a spot which possesses neither the advantage of a sea-coast, nor even of tillage, the open country consisting almost entirely of rough pasturage—devoid of sheltering "hedgerows"—and rising to the fringe of moorlands above. On the other hand, there are water-frontages on two sides, with a fair proportion of self-sown natural wood—*plus* the inestimable advantage of an almost African solitude! For the division of Bellingham in Northumberland, wherein Houxty is situate, covers an area of 261,184 acres, equal to 385 square miles (the largest "rural district" in England), with a decreasing population of under 6000 souls—say about 15 to the square mile. In England as a whole, the population is 701 to the square mile—double that of Germany or Japan. In Scotland it is 160, while France has only 87, the U.S.A. 37. The following comparative figures for our Colonies form an illuminative object lesson:—

Australia and Canada have each	.	.	.	.	2 people to the square mile.
South Africa has	.	.	.	.	10 " " "
New Zealand has	.	.	.	.	11 " " "

A PERSONAL RETROSPECT.

The Sabi Sanctuary—Transvaal.

That little Houxty venture is not the Author's only contribution towards the safeguarding of wild-life. In 1899, when I spent three or four months in the Bush-veld of north-eastern Transvaal—a region which only twenty years earlier had teemed with big-game of every kind indigenous to the Sub-Continent—I found it almost literally a shambles, everywhere overrun by galloping gangs of Boer hunters, with repeating rifles and their escort of Kaffir "after-riders" on fresh horses—all blindly engaged in putting the final touches to total extermination—so far, that is, as extermination was humanly possible on a veld so favoured by Nature.

The crucial point that at once arrested my attention was

the peculiar natural and physical adaptability of this Bush-veld of the Sabi for a big-game Sanctuary—and it is useless for any other purpose. A vast, low-lying and fever-drenched wilderness, 12,000 square miles in extent, the Sabi Bush-veld is uninhabited and uninhabitable by man, black or white, save only during the four dry months of winter. It is, moreover, definitely enclosed by mountain-barriers and big rivers that facilitate supervision and control. A concrete scheme to that effect, and setting forth the above advantages in detail, I drew up and, with my friend J. C. Ingle of Bushbuck Ridge, laid before the Colonial Office (Mr Joseph Chamberlain being then Colonial Secretary) in December 1900—a copy of which document is given in the Appendix to the present work.

So favourably did my plan impress the Authorities at Whitehall that, upon the conclusion of the South-African War, it was at once adopted in full. Nothing more, however, than the credit of its initiation falls to my share. It is due to the masterly administration of the Sabi Sanctuary during five-and-twenty years (often in face of fierce local opposition and prejudice), by Lt.-Col. J. Stevenson-Hamilton, that the poor decimated Bush-veld of 1899 to-day boasts a wealth of animal-life hardly to be surpassed in the entire African Continent—perhaps in the world.

Another powerful auxiliary in the initial work was Sir Alfred E. Pease, Bart., the lion-hunter and a cousin of my own, who was administrator of the Eastern Transvaal (including the Sabi Sanctuary) from 1903 to 1905, and who writes me:—"Abel Chapman planted, A. E. P. watered, and Stevenson-Hamilton produced the crop."

The full history of this great Sabi Sanctuary forms a literal Romance in Wild-Life.¹ From the "shambles" of 1899, and

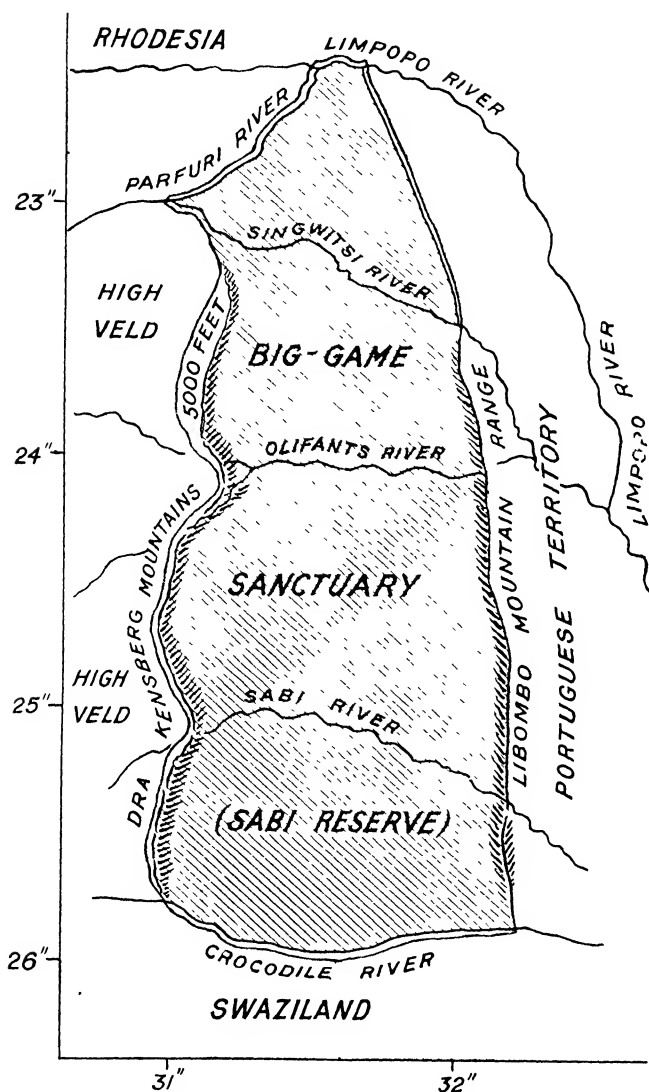
¹ It will be found related in graphic detail in Col. Stevenson-Hamilton's periodical Reports to the *Journal* of the "Fauna Society." Specially striking it is to read in the earlier Reports—say in 1903—what wretched remnants of the big-game then survived, and to compare those paltry totals with its present abundance. The whole story is a speaking testimony to the value of "Sanctuary."

the above small beginnings, it has now developed into a valued National asset, recently adopted by the Union Government of South Africa and renamed *The Kruger National Park*. To-day the Sanctuary is a vast natural "ZOO," teeming with big-game, including elephants, rhino, buffalo, and eland—(these four practically extinct in 1899)—as well as antelopes, from such noble forms as the sable and roan, koodoo, waterbuck, and brindled gnu; down to the tiny duikers and grass-antelopes, as well as with zebras, giraffe, warthog, ostrich, and smaller game, and, of course, the lion. Another special charm is that many of these big wild-beasts, living thus in absolute security, have learnt largely to abandon their deep-rooted distrust of man—*almost* as much as the wood-pigeons and wildfowl of London Parks! Amazing indeed is it to read that animals which we formerly counted among the wildest of the wild—such, for example, as the gnu and sassaby—now allow tourists to stand by and photograph them!

It should be emphasised that the predatory carnivora—from lion, leopard, and hunting-dog (*Lycæon*), down to the smaller felines, genets and mongoose—are held severely in check. Hence bird-life (especially game) has benefited in equal degree and multiplied in the same proportion as its four-footed neighbours.

Finally, the entire cost to the South-African Government of maintaining this Sanctuary of 12,000 square miles—(more than double the extent of the Yellowstone Park in the United States)—is less than £5000 a year, not much more, it is probable, than is sometimes spent upon a single deer-forest in the Scottish Highlands.

In the Rocky Mountains, Canada has set aside seven great "Reserves" as National Sanctuaries for wild-life. Of these, the largest is Jasper Park in the Northern Rockies, which extends to 4400 square miles; while the area of the whole seven approaches 10,000 square miles, my authority for these figures being the *Times*—"Canada Number"—of 1st July 1927. It is indeed a magnificent effort. Still, neither Canada in the Rockies, nor the United States in their Yellowstone Park,



SKETCH-MAP OF THE SABI BIG-GAME SANCTUARY (TRANSCAAL).
(12,000 square miles in extent.)

Originally initiated by Abel Chapman in 1900. Now renamed Kruger National Park.

quite come up in area to the level of my own little excursion in South Africa! See Record of 27 years later at p. 341.

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IN SPAIN, as already outlined in Chapter VII., the Author was instrumental in initiating those steps which eventually assured to the sore-threatened survivors of the Spanish Ibex (*Capra hispanica*) a restoration of the status of that superb game-animal, which now—after a terribly narrow escape from extirpation—surpasses in its abundance anything known for a century or more. In that case also, equally with the South-African enterprise, the Author was no more than the humblest of instruments; the entire credit being due to the unselfish intervention of those great Spanish friends of his whose prompt action far surpassed his utmost hopes.

IN NORWAY, the same—except for a failure. Willingly would I have helped the reindeer of Norway equally; but for the persistent refusal of the Norsk authorities to recognise facts that stared them in the face—until too late. In 1895, on the introduction of cheap, long-range repeating rifles, I ventured urgently but vainly to warn them that their herds of wild reindeer—a valuable asset to the State, being confined exclusively to the “high fjeld,” which is national property—would be shot out and exterminated *within seven years*. That forecast proved to be an under-estimate; since as early as 1900 (that is, within *five years*), the Norwegian Government was compelled to remodel their Game-Laws and to proclaim a seven years’ total jubilee for the wreckage of their reindeer—a step only just in time to save a mere handful of sorry survivors (see *Wild Norway*, 1897).

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[The above little Retrospect has been given place because big-game hunters and punt-gunners are wont to be held up to execration as merely callous slaughterers, men of purely blood-thirsty habit. The above facts—and, better far, a perusal of the Reports of the *Society for the Preservation of the Fauna of the Empire*—will serve to show that the assumed Ogres

"love game as though they were the father of it," and are always *acting*, while their armchair critics often limit their energies to talking. Talking will not safeguard threatened lives.] Now let every reader of this book join the *Fauna Society*, and weigh-in with his ten-shilling subscription.

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REFLECTIONS ON THE "INTERNATIONAL CONFERENCE ON THE PROTECTION OF WILDFOWL"

(HELD AT THE FOREIGN OFFICE IN OCTOBER 1927.)

Of the whole category of Game-animals—those, that is, whose capture supplies human food—in no single class is the percentage taken by man so minute as in the wildfowl. Their inherent wildness, the nature of their haunts and limitless range of flight, combine to form a sure protection against us. These qualities alone assure their well-being and safety without need of legal crutches. In localities where wildfowl are most keenly pursued, the proportion killed by man may amount to, say, three or four per cent., varying in accordance with varying climatic conditions, but never approaching ten per cent. in any country or under any conditions whatever. In the Spanish Marismas, where wildfowl are counted in millions (all northern-bred), the proportion killed may be estimated at one or two per cent., but is probably no more than one or two per thousand (see p. 256). Compare these percentages with the toll exacted from Game.

Assuming that, in wild foreign lands, an equal toll is taken by natural enemies—eagles, hawks and beasts-of-prey—even so, the doubled total of loss would never reach the normal annual increase in this hardy tribe.

The recent International Conference in London (and equally those previously held in Sweden and Denmark) was composed of learned and highly distinguished Professors of Zoology, Cabinet-naturalists and theoretic enthusiasts; but without, in my knowledge, a single practical wildfowler. Primarily the whole inquiry was based upon the fetish that "wildfowl are decreasing in Europe"—which is not the case. No evidence was adduced.

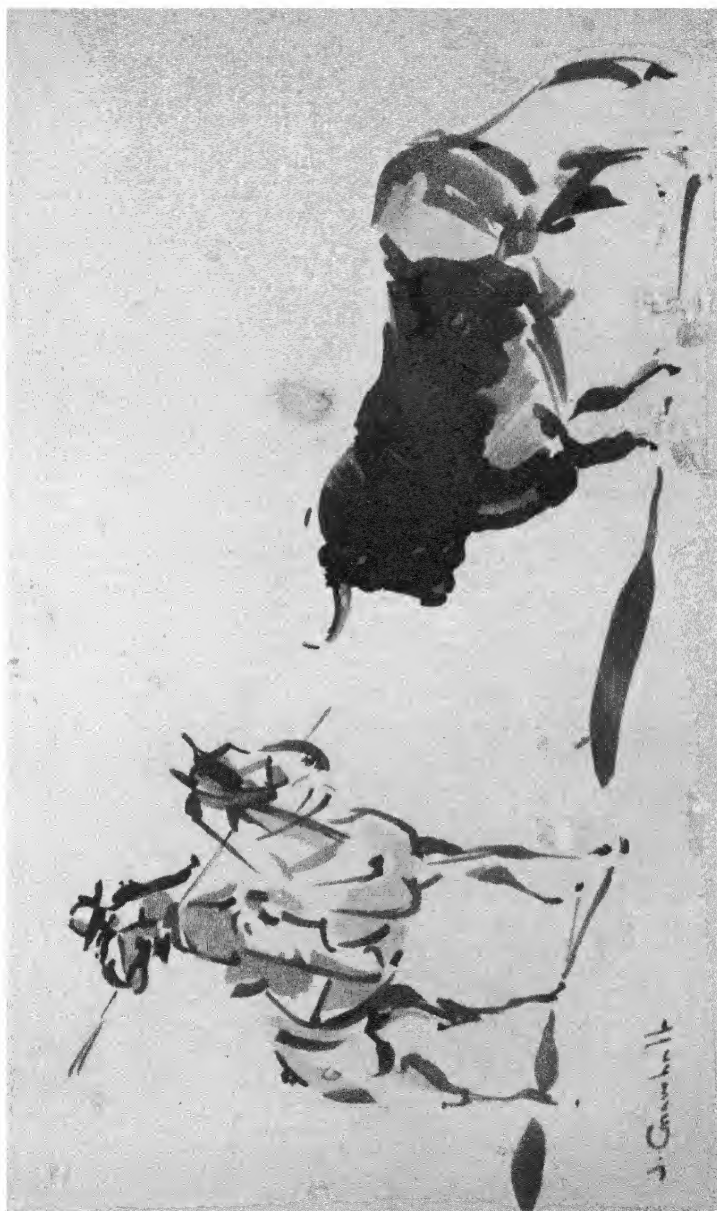
None was available, since no such "decrease" exists. Quite the reverse—in all their favoured resorts, alike at home and in Europe (or beyond)—say in Spain or Morocco, in Greek or Latian wilderness, on Danubian or Nilotic delta, and elsewhere—wildfowl to-day flourish and abound in the same prodigious quantities as they have ever done these sixty years ago . . . or 600! There are regions where their numbers reach the "saturation limit"; but those regions lie beyond the ken of Whitehall—or of Stockholm or Copenhagen. That "wildfowl are decreasing" is a purely scientific hallucination. Most deferentially I would ask:—Has any single member of the Conference been at the pains *to go and see for himself* even a few of those remote regions where wildfowl are wont to congregate? Has any one of them spent a winter—or a week (even a day)—aboard a gunning-punt? Their "resolutions" clearly point to a negative reply.

Now let that worthy and learned assembly straightway forgive their humble critic: let them, in chastened spirit, reflect on the lesson of their own 50-years' failures: and at once resolve to strike a fresh course in the fresh light vouchsafed herein (and at page 52 *supra*), as well as, in far broader perspective, in *The Borders and Beyond*, Chapters XXXII and XXXIII. May they, at last, realise that where practical knowledge is lacking—even despised—the highest intellectual abilities must fall below zero. Finally, let them accept, as a peace-offering, this bit of wisdom crystallised in five Spanish words:—

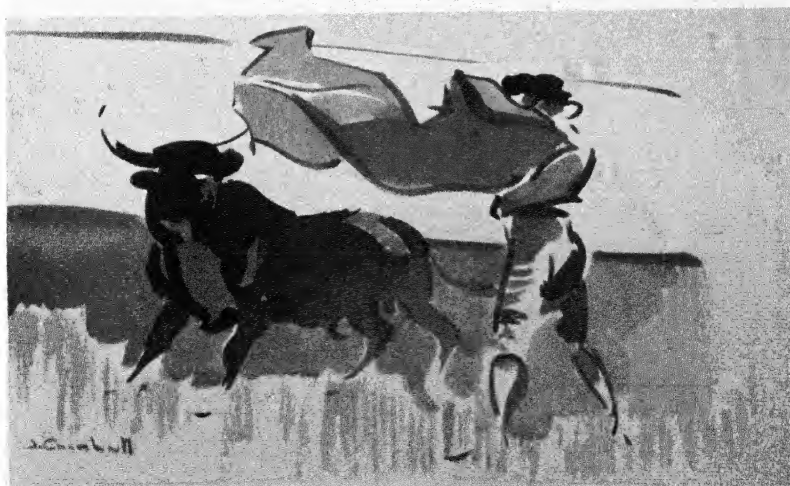
"INTIENDE PRIMERO Y HABLA POSTRERO."

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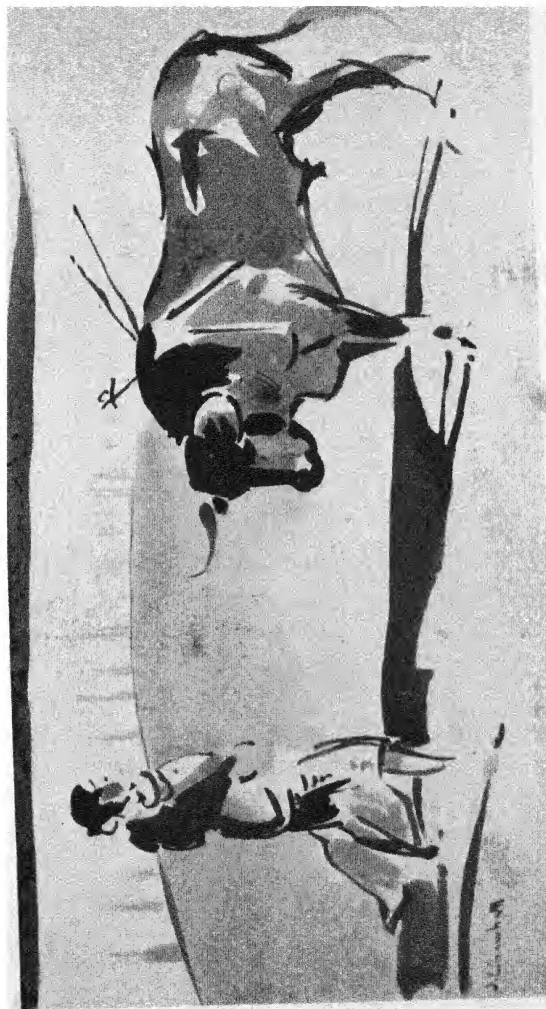
No; that Gilbertian Conference can only be likened to a conclave of highly skilled surgeons deftly plying knife, lancet, and scalpel, on a totally false diagnosis. . . . Poor patient!



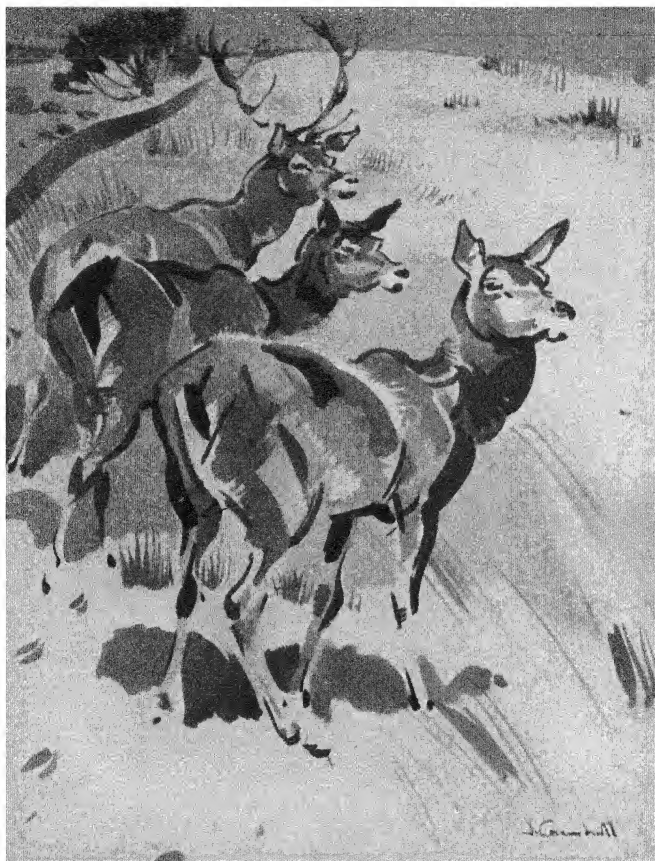
THE CHALLENGE.



THE SPANISH BULL-FIGHT.
By Joseph Crawhall.



AFTER THE STROKE.
By Joseph Crawhall.



RED DEER IN THE COTO DOÑANA, SPAIN.
By Joseph Crawhall.

[To face p. 217.]

CHAPTER XVI

SPANISH MEMORIES

[FROM 1871 TILL THE OUTBREAK OF WAR]

THE COTO DOÑANA.

FROM time immemorial the Coto Doñana had been recognised as one of Spain's most famous hunting-grounds—during centuries a favourite resort of Spanish kings. In physical formation this semi-isolated region is almost unique. In form, in a sense, the Delta of the Guadalquivir and occupies the whole space between that great river and the Atlantic outside—in length something like forty miles with a varying breadth that is more or less indefinite—and practically cut off from the mainland by the “marisma.” Its main constituent is sand—blown-sand, presumably overlying the deposits of alluvial soil brought down during ages by Guadalquivir. At its seaward extremity, towards the embouchure of that river, the Coto is overgrown with pine-forests, all embedded in luxuriant undergrowth. The central region is a strange blend of silent Saharan wastes and mountainous sand-ridges, between which are interposed long straggling belts of stone-pines and scrub-jungle—weird landscapes of indescribable beauty. Farther inland, lie undulating plains, all clad in that wondrous wealth of shrubbery that characterises southern Spain—cistus and lentiscus, arbutus, magnolia and tree-heaths, rosemary and palmetto, with manifold kinds unknown to us. These form dense thickets, usually interlaced with terrible briars (*salza*)—the holts of lynx and wild-boar. Here pines are replaced by scattered groves of cork-oak, ilex, and wild-olive. The last salient feature to be noticed is the marisma—leagues of flooded levels that separate the Coto proper from the river far away,

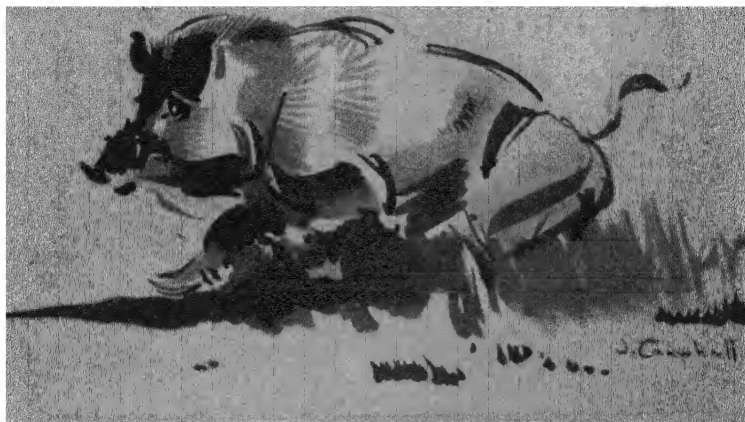
and from the rest of Spain. The whole, whether dry land, forest or jungle, sand-waste or water, forms a vast inhospitable wilderness, virtually uninhabited and abandoned to wild-beasts and *feræ nature* of manifold types.



IN DOÑANA. (From *Unexplored Spain*.)

As already stated, this historic Coto Doñana had always been a Royal hunting-ground. Then, in crucial hour, by one of those singular chances that befall—may one perceive some kindly interposition of Providence?—the whole Coto lapsed, during a happy hiatus of some thirty years, into

the hands of such humble foreigners as ourselves. Further, it needs special emphasis that the Coto Doñana, beyond its unique importance as a sporting domain, forms a focal point in wild bird-life—particularly of those rarer types that few have seen outside of books and museums—that is unsurpassed in all Europe. The said hiatus, moreover, precisely coincided with the Author's more active period of life—for such blessings thanks be!



WILD BOAR. By Joseph Crawhall.

Latterly (since 1913), the Coto Doñana has reverted to its original and perhaps more appropriate status. Under the ægis of the Duke of Tarifa, its big-game shooting is now largely concentrated into a single annual function, always given in honour of H.M. King Alfonso XIII., one of the quickest and most brilliant shots in all Spain—perhaps in Europe. An example of this occurred during the shooting in January 1926. A wounded wild-boar was held-up by the dogs, and one of the keepers—a dare-devil forester of our own day, by name Juanillo Espinal—was about to administer the *coup de grâce*, when he tripped over a root and fell right under the tusks of the enraged

beast. His Majesty rose to the occasion and by a lightning shot through the brain, saved the situation—and the keeper.

[During the present year (1927) the Royal hunting-party, in four days, secured 156 head of big-game, to wit—121 stags, 32 wild-boar, 3 lynxes—thirty-four of these falling to His Majesty's rifle. Later, the King, with H.R.H. the Prince of Wales, returned to Doñana to hunt wild-boar with the lance—*á arma blanca*, in Spanish phrase ; cold steel in English.]

With these later and loftier aspects of Doñana, however, we are no longer concerned, and the object of this chapter is to recall some few of the impressions and the incidents of our own long tenure.

(1) **First-foot in Doñana** (1872).

It was on the eve of the eighth of April 1872 that the Author first set foot in the Coto Doñana, which, for forty years thereafter, was destined to form a feature in his life. During the ten days preceding, I had been navigating the vast unexplored expanses of the outer marisma, bewildered with its amazing extent, its wildness, and its wealth of aquatic bird-life—including flamingoes in tens of thousands, hordes of avocets, stilts, spoonbills, egrets, herons and ducks of unknown species—besides such “fearful wildfowl” as wild camels!¹ Our flotilla consisted of three flat-bottomed *lanchas* of the type shown at p. 250; beneath which, as each night fell, we slept on some lone islet and with only a sackful of damp hay between our persons and Mother Earth. The retinue comprised two swarthy Spanish marsh-men from San Lucar, both of whom might pass as types of the dare-devil desperado! On this particular night our course across the samphire-spangled marisma had brought us close to the shores of Doñana, and we encamped beneath some immemorial oaks at the Fuente del Duque.

¹ I recollect the storm of criticism and incredulity that burst, worse than a swarm of hornets buzzing round one's ears—and stinging too! when, later on, I recorded the existence of wild camels in Spain. But for the confirmation of Howard Saunders and Lord Lilford (both of whom had heard tell of the phenomenon), I might have sunk to the level of a Munchausen.

Now the said Fuente del Duque is a pretty name without a place—a place, that is, which will not be found inscribed on any map, or even convey a local significance save to a minute barbaric minority who love the outer wilderness. It is, nevertheless, as pretty as its name, though merely a jungle-clad promontory, adorned with cork-oak and ilex, right where the forests and thickets of Doñana impinge upon the vast watery wastes of the marisma. No sign of human occupation obtrudes save that, a mile or two southwards, our shooting-lodge, the ancient ducal Palacio de Doñana, stands perched on the very verge of the marisma—between spacious vistas of marsh and water on the one horizon, of forest and scrub on the other.



WILD CAMELS IN THE SPANISH MARISMA.

(A "thumb-nail" impression from life by Joseph Crawhall Chapman.)

Naturally, our camp-fires promptly brought down upon us the watchful head-keeper, Antonio Trujillo, a giant personality worthy as a character for Cervantes. Now my own presence in the Coto, guns and all, was correct enough, authorised by letters from the Administration to collect "*pajaros raros de la marisma y de rapiña*." But the case was different with my two swarthy accomplices. They, I knew, hailed from San Lucar: but did not then know, as I have since been informed (perhaps libellously?) that most San Luqueños are ill-reputed as habitual deer-poachers and villains of deepest dye, apt at blood-letting and suchlike lawless joys. Already I had had occasion to notice that the hairy chest of one of my friends and the forearm of the other bore tell-tale gashes of ominously recent date—the latter, moreover, being short of several fingers. Hence these hirsute retainers of mine could scarcely be *personæ gratae* to the Guards of a great Preserve? Trujillo, however, at once rose to the occasion: insisted on my accompanying him to the

Palacio, where I was presently installed in that big bedroom which, by strange coincidence, I have since occupied for a big slice of my life—first as a Member, later as an *Escriturario* (= Lessee) of one of the most celebrated game-preserves in all Spain.

Neither of my trusty brigands bore a Christian name. That is hardly the fashion in picturesque San Lucar, where each charming cut-throat is known by some appropriate and affectionate cognomen. My own two answered to “Ya-lo-véo” and “Dos Dedos” (roughly interpreted, “I’ve got an eye on you,” and “Two fingers,” which were, in fact, all the poor man had left).

(2) **The Fiera Manso.**

(*A Lighter Side.*)

A dozen years had passed and we were now monarchs of all we surveyed. One winter’s morning the light of dawn was just creeping in through the crazy casement of that big bedroom aforesaid, when to B. and myself, still asleep, there silently stole in one of our favourite keepers, Bartólo Cachuelo by name, who excitedly explained that off the point of the Fuente del Duque there were grazing, close inshore, two of the wild camels of the marisma. At once I sprang to action; but—very singularly—B. displayed such unwonted lethargy that I felt constrained to denounce him as a “*Fiera manso*”—quite a good oxymoron for impromptu? and set out alone. Soon Bartólo pointed out the (very) hump-backed pair, easily visible between intervening trunks and only some 200 yards away. I had taken my rifle, but can hardly now recall whether a fatal design had filled my breast—probably not, since never did we molest our bactrian neighbours, and on occasion they had passed unharmed within range of our duck-shooting posts at dawn. The true object was, more likely, merely a “close-up” view. Upon creeping to 100 yards, a certain suspicion arose, and then inspection with binoculars revealed the sad fact that the tawny objects were not camels at all, but an imposture composed of horse-rugs

so deftly arranged on poles, sacking, and ropes as *nearly* to deceive the very elect! I had been *hoaxed*, badly hoaxed! Bartólo had vanished—I scarce knew *why?* but at once



SPANISH IMPERIAL EAGLE (*Aquila adalberti*).

Adult, Coto Doñana, April 1891.

understood why B. had played the *Fiera manso*¹ that dawn! On returning, crestfallen, to breakfast, I learnt that Bartólo had

¹ *Fiera*, a savage wild beast. *Manso*, tame. The title of the Spanish play is "*La Fiera Mansa*"; but grammatical accuracy hardly counts on a winter's dawn. Besides, in this case, it would scarce be consistent?

fled lest, on discovering the fraud, I should have shot him out of hand! I must have borne a bad character in those old days!

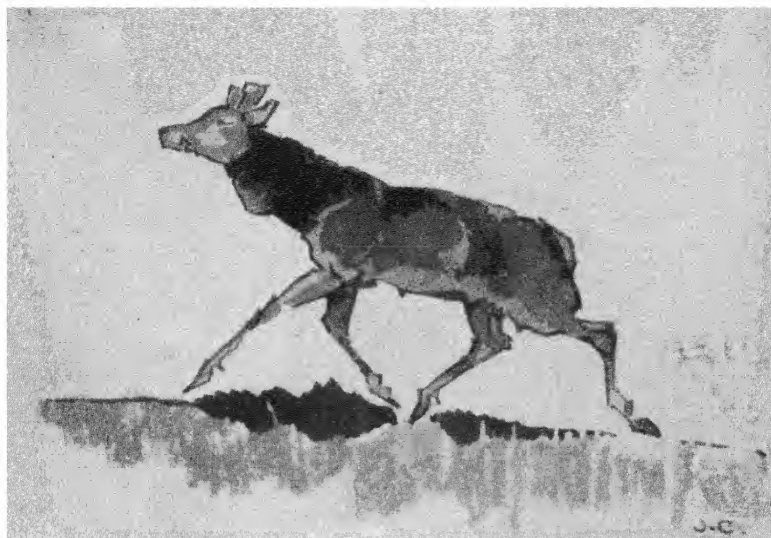
The following half-dozen incidents, selected from among hundreds in our diaries, will serve to illustrate the varied types of sport we enjoyed for so many years in the Coto Doñana, as well as to convey some idea of the nature and habits of its game-beasts and wild-life in general. The whole subject has, of course, already been treated in completest detail in our two books on *Wild Spain*.

(3) Deer-Driving in Pine-Forests.

(*Wood-Craft of the Red Stag.*)

My post was behind a breast-high clump of cistus and golden-flowered genista that crowned the crest of a sand-ridge—one of many such that traverse these undulating forests. In front, about 200 yards away, a similar ridge ran parallel and the intervening dip was clad in the usual scrub common to southern Spain—mostly cistus, broom, lentiscus, and sweet-scented rosemary, about 4 feet high and fairly open—the whole being interspersed with scattered pines. Being posted on higher ground, I could crouch facing *into* the beat, and so command every movement of game to a considerable distance.

Presently, as by magic—so silently do wild creatures come—the opposite ridge was alive with graceful forms; there were fifteen or twenty of them, but all hinds except an insignificant “knobber” or two. For some minutes these deer held the ridge, some looking backwards towards the distant beaters, still miles away. Then, down in the dip on my left, the merest suspicion of *something* moving caught my eye, just for the flash of an instant. It might have been the tip of a horn, or merely some tasselled reed shaken in the wind. The scrub at the suspect spot was quite low and fairly open, with intervals between; yet never another indication was vouchsafed, though my eyes scrutinised every inch. Already I had half-satisfied myself that the suspect movement had actually been but a



SPRING.



SUMMER.
RED DEER IN DOÑANA.

shaken reed when, right behind, the faintest of rustles brought my head round . . . and there, forty yards away, stood the stag. He had passed my guard unseen ; but oh, what a beauty ! One of those glorious heads, rugged and black as polished ebony, with a forest of sharp white points and triple tops that shone like ivory in the sunlight—in Spanish “Coronado,” a Royal. The stag stood three-quarters off, half-hidden behind the stiff lentiscus-bush that had caused the tell-tale “rustle,” and gazing backwards, electrically alert. No time, alas ! is ever given for contemplation ; yet that noble figure remains fixed in memory. The stag stood *only two yards* outside my permitted line of fire, so that on the slightest hint of danger, a single bound would take him back safe into “sanctuary.” Yet before the gun could be brought to bear, it was necessary to make a quarter-turn. That is the drawback of facing *into* the beat—safer to face outwards and depend upon ears rather than eyes to predicate the approach of game.¹ To-day, all went well. The quarter-turn was achieved unseen, the gun sighted at the stag still *standing* . . . then the ball took him fair, ere that first bound to safety was half-completed.

Now for the moral of this yarn. How, in wonder’s name, could a great, tall, long-horned animal pass unseen across a 200-yard thinly-bushed space where it would appear impossible that fox or hare—even a rabbit—could cross undetected. At the moment the problem seemed insoluble ; but since then analogous cases have supplied an answer. Thrice later I have seen stags thus approaching the danger-zone. On each occasion the stag was travelling *lower on his legs* than it seemed possible for an animal of his build to do, his belly within a foot of the ground—*ventre á terre* : while head and neck were stretched horizontally forward and horns thrown flat back along his haunches. The general effect resembled rather the figure of a

¹ In rifle-shooting on moderately level terrain such as the Coto Doñana, it will be obvious that no shot *into the beat* is permissible ; nor before the game has passed *behind* and well clear of the line of guns. As each gun is placed, the keeper-in-charge draws distinct sand-marks to indicate the firing-line. *Inside* these no shot may be fired. That rule is adamant.

crocodile than of a member of the noble upstanding cervine race. On one occasion I measured places where a big stag, horns and all, had passed at speed (as proved by spoor) beneath



BOOTED EAGLE (*Aquila pennata*, male).

. Coto Doñana, June 1872.

strong, unyielding lentiscus branches only 27 inches from the ground ; nor could we find a single twig displaced or broken.

[The red stag, of course, enjoys no monopoly of this art of evading a realised danger unseen. Many wild creatures are adepts at it. A fox, for example, or even a hare will traverse at speed some tiny furrow not

half their own depth, yet undetected though close at hand. An interesting instance occurred the week I write this paragraph. In July 1927 we were otter-hunting on Redewater, in Northumberland, and the



BOOTED EAGLE (*Aquila pennata*, female).

Coto Doñana, April 11, 1872.

quarry had sought refuge in an extensive stronghold (or "cundy," in local term), one entrance to which was in full view from the opposite bank, barely thirty yards distant, and quite a yard from the water. When, at length—under persuasion of terriers—the otter emerged, the visible effect (to those few who saw anything at all) was as though some spectral form, flat as a flounder, no bigger than water-rat or weasel, and colourless

as flowing water, had slid down into that element—so gentle and ghost-like was its glide, nor did a ripple break the surface. Only a string of “beads” betrayed its course upstream. Presently, when the great coaly-black carcass of a dog-otter, 22 lb. weight and 4 feet long, lay before our eyes, it seemed well-nigh incredible that so big and black an animal could have assumed the small, slim, and colourless form but half-seen so shortly before. Still the stag, along with the elk and all the deer-tribe (*Cervidae*), have their great spreading antlers to consider—the antelopes equally their horns—adornments which do not impede otters and the less ornate animals named.]

(4) Another Inspiration.

Inspiring are those moments when—long before the beat has actually joined—you descry afar, and for but a moment, the broad antlers of a moving stag. He has been disturbed, all unbeknown, by the flanking line of beaters who are now riding round to encircle the covert, and may next appear at some totally unexpected spot: for the intervening space (though at superficial glance apparently level) is a maze of intricate dips and hollows, ridges and glades, often camouflaged by half-hidden pines, cistus and tall brushwood. A hasty glance shows your next neighbour, 200 yards away, still busy completing his “shelter,” and you have a strong suspicion that the man beyond will just now be lighting a cigarette!

The dominant question fills one's thoughts—where will that mighty hart reappear? Perhaps he dashes, unharmed, upon the careless, perhaps upon the slow—quite possibly unseen by either! Lucky for him should such befall. On the other hand, those moments of glorious expectancy may eventuate in a gentle rustle of parted brushwood close by . . . in the clinking of cloven hoofs . . . and the noble game appears, bounding past an unsuspected ambush. Probably many a stag that falls to the watchful gunner has already offered a *first* chance to the careless.¹

¹ How often in grouse-driving at home one witnesses similar incidents. Slightly outside the expected area, a pack is sprung by flankers approaching their posts—it sweeps along silent butts! Guns No. 1 and No. 2 do not even see the game: No. 3 is not yet loaded! But there are those who are never caught napping thus.



RED DEER IN DOÑANA.
 (1) Clearing the Velvet—July.
 (2) "*Habet*"—Winter.

In driving Big-game on broken ground such as Doñana, there is a charming variety in almost every shot—hardly two chances are alike: and incessant vigilance that never relaxes, is the primary essential. Everywhere there are dips and gently-sloping hollows, apt to escape notice—since the brush-wood grows taller there—but which form wonted *salidas* (lines of escape) of the game. A keen eye may detect the ivory tips as some great stag slips by—even when, on a windy day, no sound can reach his ear. This the careless gun only finds out when the keepers come in, following on the spoor, and inquire: “Didn’t you see *that*?” No! he had seen nothing. . . . Wild-boar, of course, cannot be seen in strong scrub.

(5) Deer-Stalking at Dawn.

This morning (4th January 1903) as day was breaking, we had “got in” almost within shot of a good stag, when we discovered three hinds in an intervening hollow, blocking our advance. Presently, one of these suspected danger and *barked*; whereupon the stag at once made off. The keeper, Juan Dominguez, quaintly remarked, “Hinds only bark at a *persona* (human being), never at any other *bicho* (wild beast!).” To me there was fascination in that matutinal stalking—that mysterious hour of breaking dawn when wild Nature is all amove—the nocturnals retiring to their lairs; those of day reawakening to fresh life. That fascination, however, was never shared by our forest-guards, who held the chivalrous view that game should not be taken unawares.

The manœuvre was not exactly “stalking” in the conventional sense of the term; but rather intercepting the deer as they returned from the open marshes and rush-clad straths where they had spent the night, feeding—and still snatching a stray mouthful on their way to the big forests and jungles where they lie-up all day, sometimes bearing a buff-backed heron or a magpie on their withers! I remember Pepe Espinal’s scathing soliloquy as I laid low my first grazing stag thus (dropping his companion also, as he bolted at the shot):—“That’s the

first stag I ever saw shot *with his head down*!"—a knightly sentiment.

If a personal memento be permissible, here is one. One evening in 1908, while showing our assembled forest-guards my newly published *On Safari*, with its pictures of mightier



NOT ALWAYS SAFE TO FOLLOW FEMALES—(FOR STAGS).

An incident in the Coto Doñana.

game than roam even Spanish wilds—elephants, rhinos, buffaloes, lions—it amused to watch their amazement. Those wild eyes of theirs seemed to grow semi-sessile! Presently came the question—"But is that really Your Excellency—you, who are so mild, and who speaks so gently?" . . . [Left blushing.]

The Spanish red-deer (as we first pointed out in *Wild Spain*) belong to two quite distinct races—the smaller, lowland type, such as these

of Doñana, which weigh, say 200 lb. clean, and whose antlers (10yals) rarely exceed 24 to 28 inches: whereas the mountain stags of the sierras run from 36 to 42 inches in horn-length, with an avoirdupois of 300 to 350 lb. We have one record of a stag shot in the Sierra Morena in February 1895, which weighed, clean, 14 *arrobas*, equal to 350 lb., or 25 stones English measure. This splendid beast carried 17 points, horns 40½ inches. The two races have since been differentiated by Dr Angel Cabrera of Madrid as *Hispanicus* for the lowland deer; *Bolivari* for the giants of the Sierra.

A differential far more conspicuous (but purely individual) is common not only to both the Spanish races, but equally to Scottish stags—that is, the widely differing nature and character of the horns. These, in the majority, are plain unicolorous brown, with blunted tips only a shade lighter than the main beam: whereas the minority carry rugged black antlers, ebony-like, the points of which are long, sharp, and white as ivory—far handsomer trophies.

(6) **Spanish Lynx** (*Lynx pardellus*).

At the Saguasales del Puntal.

1st January 1908—As the co-authors of *Wild Spain*, being the last two guns in line, walked to their posts behind the keeper of the beat—Juan Dominguez -B. suddenly pointed to a lynx crossing an opening beyond some standing water. The animal quickly disappeared and Dominguez (who had not seen it) said, "That is not a lynx, it's a hare"; and, in truth, there *was* a hare not ten yards from the spot where the lynx had just vanished. The hare, moreover, was behaving curiously, hopping a few yards and then squatting on her tail in the wet.

The writer's post happened to be at that exact spot; and hardly had the beat commenced than I saw a lynx approaching in the silent, sedate style characteristic of those felines. It passed full-broadside not forty yards away; but the gun being loaded with ball, no shot could be taken till the beast had passed outwards to the "firing-line." Meanwhile, it had twice disappeared, and when I picked it up again behind was farther away and in thicker bush. On firing, I at once realised the

mistake—it was *that hare* I had shot at! and that creature in a dazed, half-silly sort of style, came hopping straight up to my post, her tail dragging in the water, and for half-an-hour remained sitting close by. I could only assume that she had

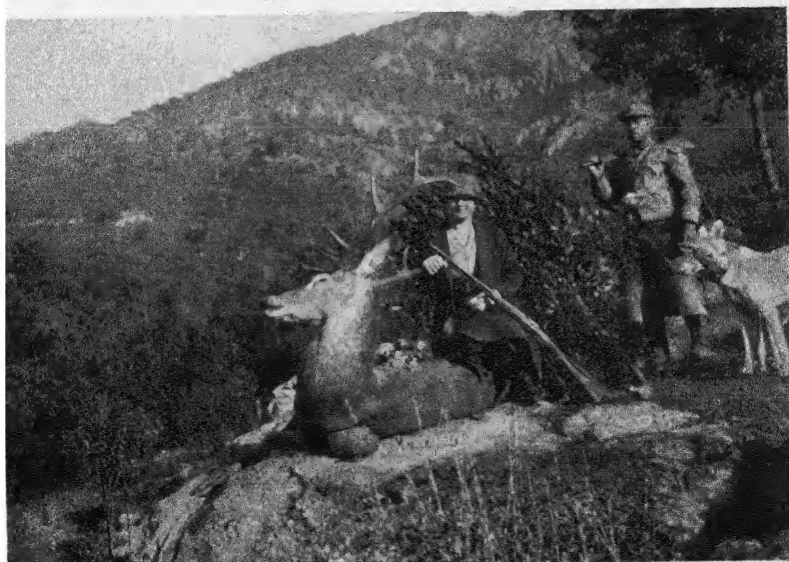
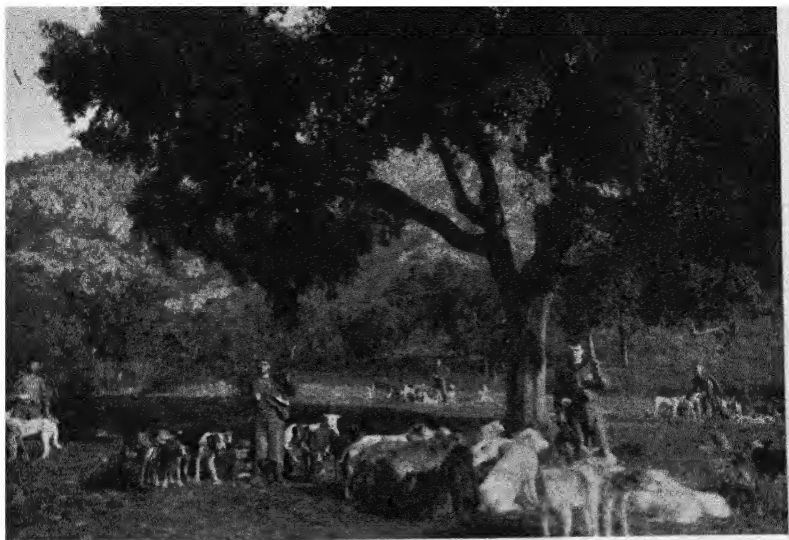


SUSPICION. (From *Unexplored Spain*.)

been, as it were, hypnotised by the lynx—as at home one sees a rabbit robbed of its power of flight when pursued by a stoat.

So soon as the beaters approached and the dogs found the hare, the new danger at once exorcised the hypnotic spell; for she then went off at full speed.

That no mistake had been made was at once proved by



A MONTERIA (MOUNTAIN HUNT) IN SIERRA MORENA AT EL RISQUILLO.
H.E. THE MARQUÉS DEL MÉRITO.

Above—Showing five packs of hounds, each under its own huntsman, assembled preparatory to the cast-off.

Below—One notable result.

(Photo by Sr. D. José Pan Elberto.)

examining the spoor. A big lynx had passed close in front : while the point in rear where my bullet had struck was less than two yards from the spot where the lynx had suddenly swerved off at a sharp right-angle.

An hour later, in a small thicket a mile away, we secured a big male lynx, and a female on the following day. The pair weighed $31\frac{1}{2}$ lb. and $18\frac{1}{4}$ lb. respectively and are now in the National Collection at South Kensington. Another pair, shot a month later, weighed male 31 lb, female 23 lb. Height at shoulder, male 21, female 19 inches.

The lynx is essentially a scrub-loving beast and rarely by daylight leaves the security of the bush. When forced to cross open ground, on the few occasions we have seen such to happen, the lynx runs in great bounds, but at no great speed.

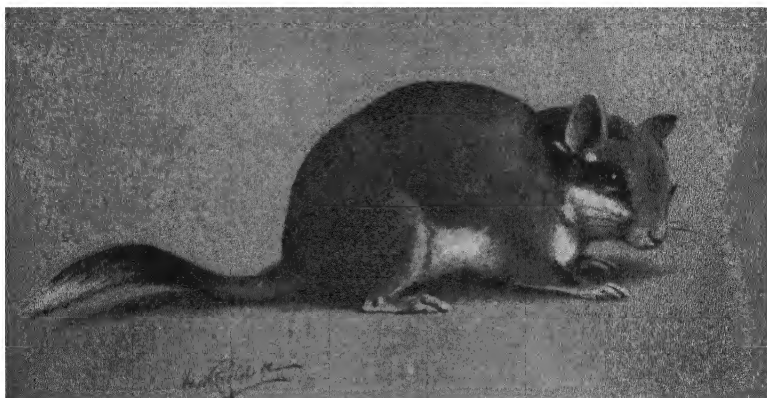
Our keepers in Doñana (men trained generation after generation to the observation of the wild-beasts under their charge) assure us that they have seen lynx *catch partridge on the wing*—that is, that, while a covey was speeding low over the scrub, a single long forearm shot up and captured the flying prey. A parallel could be found in short-slip standing *close in* to a Demon bowler from Australia!

In India, Mr A. L. Butler tells me, certain Rajahs who keep trained lynxes, exercise them in speed thus :—A crowd of blue-rock-pigeons is assembled at a feed of corn ; then at a range of some twenty yards, a lynx is unhooded and enlarged. The pigeons of course scatter at once, and no bird is smarter on the wing : yet the lynx not only knocks out his brace, but frequently a second, or even a third, by bounding leaps in air. Almost the feat caps our Spanish keepers' yarn?

When newly killed the ear-tufts bend directly inwards, that is, towards each other, with very slight inclination backwards. The extreme tip of the ear itself is also slightly deflected inwards. These angles, of course, depend on the *set* of the ear. In an old male lynx, the bushy whiskers and beard form a complete halo around the face—as shown in Mr Riddell's drawing (p. 131).

The Mongoose is another of the strange predatory beasts of which we have so many in Doñana—known in Spanish, generically, as "*Alimañas*." To-day (3rd February 1912), a string of five came-in to Dominguez who was "flanking" 200 yards outside me; he turned them inwards and I got a couple with one barrel. Asked how many he had ever seen running thus *in procession*, Dominguez replied, "Seven."

That term *Alimañas* includes, besides mongoose, the wild-

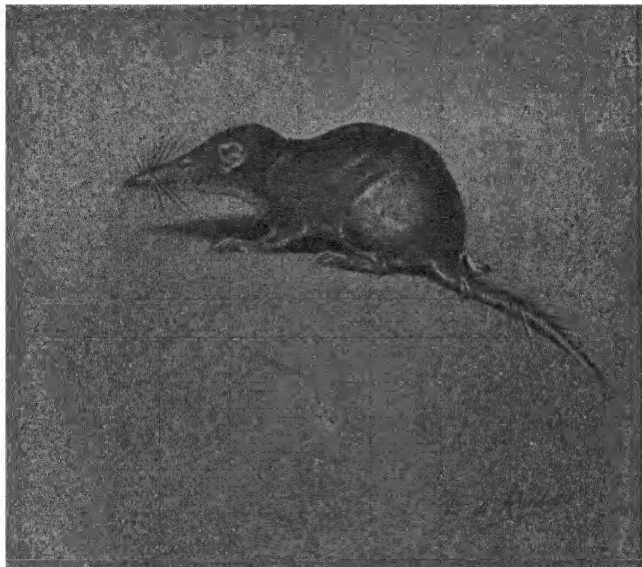


SPANISH DORMOUSE (*Myoxus lusitanicus*, in Spanish, "Liron").

Coto Doñana, May 10, 1910.

cat and badger, otter and fox—all abundant in Doñana—as well as polecat, genet, and marten-cat, which last trio, however, are more numerous in inhabited districts—such as that around our home at Arcos, where these blood-thirsty beasties find poultry-runs more convenient to raid. Of smaller mammals, we count the weasel and hedgehog, dormouse of two species, and a whole tribe of other "mice," also bats—including the Giant Noctule (*Nyctalus maximus*), which we were the first to discover in Spain: as was also the case with the tiny Dwarf Water-shrew (*Pachyura etrusca*, figured opposite). This is the smallest known quadruped in the world, measuring over-all only $2\frac{1}{2}$ inches; and of that, the tail claims nearly one. This

mite of a creature abounds in the marisma, and we also found its nest, with three new-born young—ashy-blue, with pink noses and long whiskers—floating (like that of a grebe), in the Laguna de Santolalla, on 13th March 1910. Specimens of all these Spanish animals, great and small alike, we “collected” for the British Museum (Nat. Hist.),¹ and the



DWARF WATER-SHREW (*Pachyura etrusca*).

Smallest known quadruped in the world. (Life-size.)

story of those “Huntings of the Snark” forms one of the not least interesting chapters in *Unexplored Spain*, entitled *Alimañas*—’twould be immodest to regard it as romance!

¹ Of the specimens sent home, one (the lynx) was elevated to the dignity of being the *Type* of a new species (*Lynx pardellus*), while four others were described as new “Subspecies.” The author, it is needless to add, rejects the system of recognising local races or intergrading variations under definitive Latin titles. His grounds, be they sound or otherwise, are set forth in *The Borders and Beyond*, p. 456.

(7) Greylag Geese.

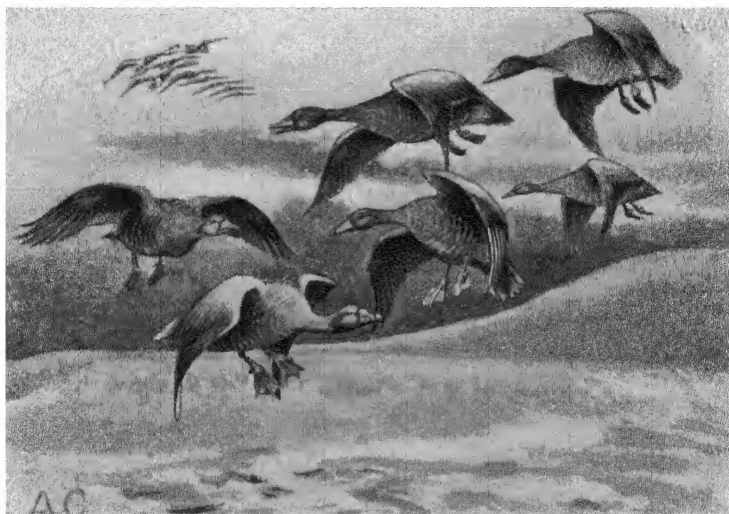
(*On the Sandhills of the Cardo-Inchal.*)

From our earliest days in Doñana the keepers had assured us that wild-geese habitually frequented certain vast sandhills each winter's dawn. The said sandhills—a notable landmark in themselves—stretch afar along the dividing line betwixt the *terra firma* of Doñana and the watery wilderness of the marisma inland thereof. A less likely spot for geese seemed impossible to conceive; but wherever geese go, we follow. The result was an amazing surprise.

Now these sandhills, known as the Cardo-Inchal, are the biggest things of their kind we have ever seen—regular mountains of pure white sand, unrelieved by a green blade, naked and glistening, scintillating in the sunlight. The Cardo-Inchal marks, in fact, a geologic boundary-line, the rampart whereat there rages to-day a titanic struggle betwixt land and sea. Hitherto, during the ages, the great river Guadalquivir has steadily pushed back the Atlantic over long leagues of conquered wastes—virtually from Seville to the sea (70 miles). The ocean retaliates by enlisting the power of *blown-sand*, marshalling it in vast accumulations that, moving inland, threaten to engulf all the lost territory—the Coto Doñana and the marisma alike—in common ruin. Such evidence as one may read, rather points to the present predominance of the salt-water combatant. Another age may discover here a European Sahara.

It was upon the naked summits of these great glistening dunes—surely the last place on earth where one would expect to find aquatic fowl?—that during long years we enjoyed a quite phenomenal duel with the greylag geese. The explanation, after all, was simple enough. The marisma affords abundant supply of food, in the shape of marsh-grasses, bulbous roots of the spear-grasses (*Cyperus longus* and *C. rotundus*), green ribbon-grass (*Cañaliza*), and other aquatic plants; but the economy of the anserine tribe demands, in addition, a frequently renewed supply of *GRIT* in their gizzards to aid in

assimilation. In that essential material (grit), the muddy alluvial superficies of the marisma is almost entirely deficient. There are, it is true, sporadic *vetas*—that is, raised ridges or outcrops, largely composed of comminuted sea-shells and other marine detritus: and these are utilised to the full extent available by the geese—as a case in point, read *Unexplored Spain*, pp. 122-4. Such scant supplies, however, are incommensurate



GREY GESE ALIGHTING ON THE SAND-HILLS—DAWN.

with the demand: in wet winters, moreover, the *vetas* are deeply submerged. Hence the vast majority of the geese—in wet winters the whole of them (and their numbers run into tens of thousands)—have come to regard the sandhills of Cardo-Inchal as their grand depot of grit, inexhaustible and accessible at all times. Thither as each winter's dawn breaks, flight their stately skeins, not in masses but in successive groups, their approach heralded afar in the half-light by a chorus of infinite caution—"gagga, gagga, gag . . ." gentle, but oh! how eloquent.

Two factors serve to help the hidden gunner. First, that in all the range of sandhills, the geese have special predilection for two or three summits only and ignore the rest. Secondly that, since they only require to recharge their gizzards at intervals—perhaps a week or ten days—it follows that each dawn brings a fresh contingent, which may not have been molested before. Other factors are strongly adverse. Rarely are enterprises of the wilder type too easy. This one bristles with initial difficulties and discomforts. The Cardo-Inchal lies midway between our two shooting-lodges, and to reach the scene of action in time—that is an hour before dawn—involves a two-and-a-half hours' scrambling ride through trackless bush, bog, and forest in the dark: then the holes for the guns must be dug overnight—else the darker shade of newly excavated sand will assuredly betray the ambush; which conjunction of affairs spells *some-one* camping-out! Again, should a breeze blow up, the hole may be filled level ere day dawn! But let us forget such evil contingency. The holes, in any case, must be skilfully placed, as small as possible, sheltered by some slight revetment or sinuosity in the wind-sculptured sands; and the keen analytical judgment of the geese *very deftly* aided by a suggestion of well-placed decoys.

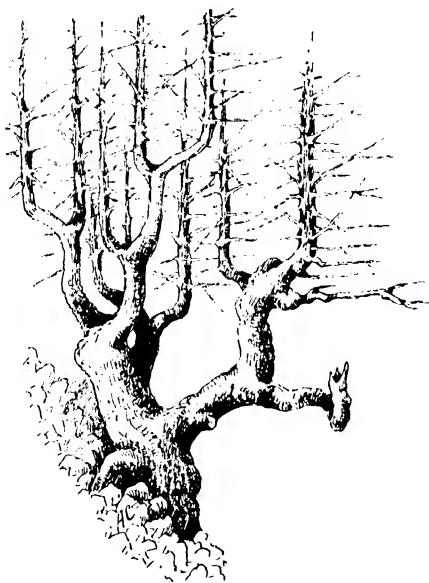
The following concise instructions in shooting grey-geese have been revised by one of its most successful exponents:—"Geese being huge birds, very strong and virtually armour-clad, with them close-quarters is the grand receipt. Remember that they have come to alight and on their second wheel will be nearer than on the first: that in the half-light they are apt to appear bigger (and therefore nearer) than is actually the case: that their speed (like that of bustard and all heavy fowl) is greater than it looks, their slow wing-action being deceptive. Steadfastly refuse all chances beyond thirty yards—let them come in (if they will) *á boca jarro*—to the mouth of the spout! and always regard head and neck as the sole target."

The morning flight only lasts for an hour, or an hour-and-a-half at most. The geese are all greylags, weighing 8 or 10 lb. apiece, tough and strong as lions. In earlier days,

from a dozen to a score of geese was reckoned an excellent morning's work for a single gun. Latterly, as we came to master the full complexities of the venture, those figures were sometimes far surpassed, as the following table shows (one gun in each case):—

1903—5th December	. .	51 Geese	
1904—30th November	. .	52	„
1908—10th December	. .	42	„ (shots fired 44)
1909—8th January	. .	38	„
1909—19th January	. .	59	„

The last total, secured by B. F. B. in eighty minutes, is the Record for Spain, and probably for the world.



TRUNK-PLAN OF PINSAPO PINE (*Abies pinsapo*), a species peculiar to the Serranía de Ronda.

(Foliage left out so as to show form of growth.)

CHAPTER XVII

FLAMINGOES

ON winter evenings in Doñana, we were wont, over long "Breva" cigars and libation of Amontillado, to hold discussions with our keen-eyed forest-guards—not only on cynegetic schemes and problems, but also on the ways and life-habits of their wild charges, furred and feathered. Many of these valued friends of ours were thoroughly trustworthy witnesses of the wild-life amidst which their years were spent, and true lessons in natural history these palavers often formed—crude they might be called, but at least essentially practical, first-hand evidence given with a direct *intelligensia* that carried conviction.

One night about Christmas 1907 the discussion turned on amingoes and their nesting-operations—a subject of deep interest to me since first discovering these birds breeding in our marismas in May 1883. A *resumé* of that conversation I noted down in my Diary at the time, and the following extracts are copied almost verbatim therefrom.

When, after a wet winter, the flamingoes have decided that there is a sufficiency of water for their requirements, their first undertaking is to build up from the shallow water a huge mud platform, or, as the Spanish call it, a "veton." This *veton*—or rather, these *vetones*, since there are usually two—are roughly circular or oval, from 8 to 12 yards in length, sometimes more, and raised to a height that clears the water by a foot or so; yet this enormous mass of mud is accumulated within two or three days' work—such are the vast numbers of birds engaged. The necessary mud is collected from immediately around the *veton* itself, as can clearly be seen in summer when the marisma is dry; the scooped-out area then forming a sort of

moat around the entire islet—in *winter* one may only realise that fact by tumbling into it!

The platform being completed, the flamingoes proceed to erect individual nests upon its flat surface, these varying from a mere inch or two, up to 6 inches in height, and completely covering the whole space—as shown in the Frontispiece.

Should fresh contingents arrive when already the plateau is fully occupied, these laggards are fain to build-up separate nests—sometimes two or three together, “semi-detached,” so to speak. This, however, does not always occur, since some “*pajaréras*” are self-contained and devoid of suburban residences.

Up to about twenty years ago (this was written in 1907) flamingoes nested—or attempted to nest—in these marismas *every spring*, whenever a sufficiency of water warranted their doing so. Yet it is grievous to record that, in our belief, never a single young flamingo has been fledged in all this region! Our veteran keepers—men versed in wildfowl lore—have never known of such an event. Neither Vasquez nor Vergara, on the marismas of Doñana, have ever seen so much as a single young flamingo actually hatched-out: while Clarita, keeper of the vaster marismas of Las Nuevas outside, though he has seen many young in the nests, asserts positively that, during his fifty-odd years’ experience, none have been reared and fledged.

It is a melancholy record: yet the reason is not far to seek. Thus, one spring in the early nineties, from a single “*pajaréra*” the egg-poachers carried off thirty *arrobas* (750 lb.) of flamingoes’ eggs—some being still left behind as the canoes could carry no more! It is the enormous quantities that can thus be gathered at a single spot that induce the professional “hueveros” (egg-lifters) of San Lucar—reputed a barbaric holt of poachers, pirates, smugglers, and pot-hunters!—to ravage the marismas far and wide. Vast as is the extent of these aquatic wildernesses, still a horde of flame-coloured flamingoes by the hundred, piled up on their *pajaréra*, is visible enough at a league or two. For generations these half-wild San-Luqueños have regarded the poaching of game—deer,

boar, even wild camels (which they sell as beef!)—together with wildfowl, and this egg-gathering—as constituting a regular business and means of subsistence. No chance and no quarter is given to beast or bird—fresh eggs or hard-set, it makes no difference! There are those, we were told, who prefer eggs “*empollados*” to “*claros*”! The smaller eggs, such as coots, stilts, terns, redshanks, etc., sell at a halfpenny: those of gulls, avocets, and the like at a trifle more, while spoonbills command a penny. Flamingoes, of course, represent the *premio gordo*, not only because they are so big, but because, once a colony is discovered, it provides a boat-load for the gathering. These eggs are said to be the worst eating; but then, in hungry Spain, “two will make a dinner for a family”!

Our efforts as “missionaries” among these wild men of the wilderness have proved quite useless. I am not *quite* sure that we have even driven home a proper sense of shame in the minds of our own keepers! For on one occasion when a company of spoonbills, seventy pairs strong, had settled down to nest at the Algaiddilla, close by the shores of Doñana, dear old Vasquez helped himself to every egg, and no spoonbill has ever appeared there since. Yet Vasquez feels no shame! One favourite half-breed gipsy, whom we have employed in winter for many long years, still calls the coots his “*pan de verano*”—summer’s bread. Good, faithful “Machachado” is still with us. He lost an eye in our service; though that was none of our doing, and he still sees better with one than many do with two. As for the rest, every herdsman in spring carries a *canastro* (basket) at his saddle-bow, to gather every egg he can set eyes on. What chance have the birds?

In the driest seasons (such as that of 1910), though flamingoes—perfect adults—remain all the summer at such few spots as yet retain water, yet none of them display the least intention or desire to nest, or even to lay eggs. . . . Phenomenal droughts, such as characterised that winter of 1909-10—leaving marsh and lucio stone-dry—affect not only the flamingoes, but equally the whole of those hordes of waterfowl that are wont to breed in the marisma. Thus the

swarming stilts, avocets, and other waders—those that remained—forbore to undertake family responsibilities under such circumstances: so likewise did several bands of unpaired spoonbills, and sandgrouse fled. Even those birds that nest on deep-water lakes—such as the heron-tribe, egrets, ibises,

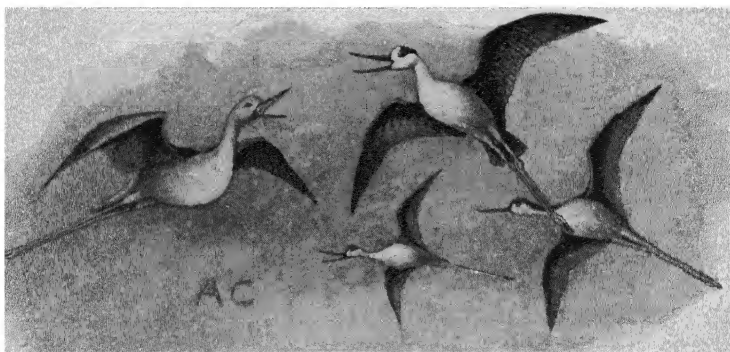


STILTS IN THE MARISMA. May 1883.

etc.—though assured of water, foresaw the lack of covert that must ensue, and the teeming heronries were abandoned. Mallards, marbled ducks and the rest remained unpaired and in hibernal packs—in short, bird-life at large adapted itself to exceptional circumstances and accepted the season of 1910 as an *Annus Non*. It bespeaks friend Vasquez' accurate intuition that he had foreseen the contingency months in advance. That spring Admiral Lynes had come out to study Spanish bird-life;

but as early as February, Vasquez foretold the failure of all ornithological enterprise. His dictum ran:—This spring no birds will breed. The “conditions needed to *calientar los ovarios* are wanting.” The results proved his prophetic insight: Lynes and I had a half-blank spring, and the whole episode forms a suggestive interlude in the economy of wild Nature.

In those wet seasons when they *do* attempt to nest, Vasquez assures us that flamingoes commence building in March, and



STILTS DISTURBED AT THEIR NESTING QUARTERS.

sometimes had laid eggs by the end of that month. This is different from our previous impressions and experience.

Here we add, almost verbatim, Vasquez' own testimony—he has spent his whole sixty years in the marisma. “The last time that flamingoes nested in the marismas of Doñana, they built-up two *vetones*, about twenty yards apart, and in two feet depth of water. The distance between nests was about equal to their diameter—say the size of a soup-plate; but some were closer, some almost touching each other. There were over 2000 eggs, though few nests contained more than two. Other eggs lay scattered between the nests, others in the water alongside. None had the young bird formed inside.” On Vasquez' approach, the flamingoes rose on their feet, flapped their wings and sent forth a strident clamour (in croaks and bi-tones), as

though showing fight. This commotion may have been the cause of so many eggs lying scattered outside the nests.

Vasquez has, however, seen flamingoes lay eggs casually on any bare bit of mud or ooze above water, without any nest or apparent idea of hatching. He reckoned the total number of flamingoes in our marismas, in favouring seasons, as exceeding 200,000.

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Previous to becoming gamekeepers with us a generation ago—*two* now, if not three!—Vasquez and his brother-in-law, Vergara, also the Clarita family at Las Nuevas in mid-marisma, had been professional fowlers, earning a somewhat precarious livelihood by shooting ducks and geese for the market with their trained stalking-ponies (*cabrestos*)—a system already described.

Vasquez, in those earlier days, lived in a "*choza*," or reed-thatched hut perched on the quivering verge of the marisma opposite the Veta Lengua; and we sometimes spent the night therein preparatory to essaying the "morning-flight" at dawn. But even in the heyday of its existence, the stability of that *choza* was precarious in the extreme—water welled-up underfoot as one crossed its naked floor; and the equilibrium of the tiny isolated patch of *terra firma* upon which it stood was only maintained by an elaborate system of watercourses, cut with rude engineering skill, to preserve the abode from sinking bodily into the quicksands and quagmires beneath.¹

That fate befell at last, and the luckless *choza* was swallowed up by the quicksands (*nuclés*). Not a sign of it remained. We then built Vasquez a more commodious abode on the firm sands of the Veta outside. His good lady, nevertheless, was hardly even then *quite* content. Never, all the winter, she complained, could she sleep by reason of the gagging of the geese on the *lucios* close by; nor, in summer, for the croaking

¹ Found this note in an old diary:—"When Vasquez and I reached the *choza* this evening (the Señora and family being away in hospital at San Lucar, with fever), we found all his poultry lying scattered around, killed by wild-cats or mongoose, his white pony standing woebegone and its legs streaming with blood from leech-bites."

of flamingoes by the thousand! The adjacent swamps, moreover, swarmed with the most bloodthirsty breed of leeches on this earth! Casually, she also mentioned that quinine cost as much as bread in her household budget. The Veta Lengua may be a Paradise for wildfowl and the wildfowler, but hardly a desirable spot to rear a big family?

A PHYSIOLOGICAL PROBLEM.

My co-Author of *Wild Spain*, the late Walter J. Buck, wrote me on 14th January 1914:—

“During the last duck-shooting in the marisma, Bertie one day had 180 pintail and wigeon, and also brought home alive a flamingo, adult, one of four that he dropped from a passing pack, and this curious thing has taken place. Instead of being a scared impossible creature, requiring *months* to become domesticated—as they usually do—he (or she) has *within a few days* recovered from a temporarily dazed sort of existence and become all at once more tame, more healthy and beautiful than the others we have had here for years—tamer, in fact, than any of the wildfowl on our waters. The wound was in the head—an eye being injured; and the effect of that *one* shot, it seems, has been to obliterate all memory of the bird’s previous life. A new phase has been started—one in which the proximity of men and dogs, the fact of feeding out of a tub, and walking about a lawn, have come quite naturally and cause no surprise. Never have I seen the like before.”

ANOTHER MEMORY—(Entirely different).

SCENE, in a train. Was about to light my pipe when the only other passenger (whose luggage resembled a coffin wrapped up in green baize) pointed out that it was a non-smoking compartment. Asked if he really objected, his reply was, “*Me moleste la pechuga*” (=it injures my chest). At the first stoppage, I got out (in pelting rain) to seek a smoker; but, the train being crowded, returned to find my fellow-passenger playing a gigantic fiddle—or violin, or similar awesome instrument. He asked if I enjoyed music, to which my reply was, “*Me moleste el estomago*.” That journey continued in silence, uninspired by either Muse.

CHAPTER XVIII

SPANISH MEMORIES (*continued*)

WILDFOWLING IN THE MARISMA.

IN SPAIN the operation of wildfowling and its scale, alike strategically and tactically, rests upon a broader basis than the pursuit as practised elsewhere in western Europe. That follows by virtue of the extent and physical conditions of its scene. For nowhere else are there found such immense areas of flooded alluvial plains as those comprehended under the term "Marisma." It may convey a sense of the vastness of these watery wildernesses to mention that a geometric mind among our shooting-partners reckoned out that our own holding in the Boetican marismas exceeded 400 square miles. That calculation, moreover, was made after we had lost (by death) our tenure of the adjoining Coto Doñana which, with its own equally extensive marismas, we had also occupied during some thirty years. The figure may be approximately correct, though I would hesitate to guarantee it to an inch or two. Elsewhere folk are wont to reckon their holdings rather in acres than in hundreds of miles?

Be it a few leagues greater or less, the whole superficies of the marisma is one great dead-level of featureless flats—note that wherever you find massed wildfowl, "scenery" is always absent. During winter the whole region is largely submerged, though the growth of low samphire-scrub partially conceals the water-surface. Still, there also lie league-long lagoons of open water (*lucios*, the favourite diurnal resort of the ducks), interspersed with scattered islets great and small—varying from a few yards to thousands of acres in extent: while certain slight depressions—the channels whereby hibernal

floods find exit—though otherwise imperceptible in the far-flung monotony, are marked by sinuous lines of cane-brakes 10 or 15 feet high, and often miles in length. Each of these is distinguished by some local name—such as El Traverso, Caño Dulce, or Buen Tiro—as familiar to the fowler as the Strand or Piccadilly to Londoners! In winter the marisma forms a rendezvous for half the wildfowl of western Europe: while in spring and summer it provides nurseries for a wealth of bird-life wondrous to witness. But are not all these things chronicled in *Wild Spain*?

Prior to our appearance on the scene, these marismas had been exploited exclusively by Spanish professional fowlers, whose livelihood during successive generations had depended upon shooting “for the market” with their trained *Cabresto* ponies. Not unnaturally, these good folk were at first inclined to resent the assumption of exclusive rights, particularly by foreigners; but sympathy is the passport to every Spanish heart, and the transitional epoch (though not without incident) was of brief duration. It ended in our enlisting, not merely the services of the displaced fowlers, but the fowlers themselves personally as valued friends and keepers—posts which they, or their successors in fresh generations, retain to this day. Precisely how valuable these wild *Guardas* have proved to our enterprise, and how much we owe to their skill in fowling-craft, is in frequent evidence throughout our books.

Naturally the aboriginal system of shooting by concerted broadsides from behind stalking-horses, appealed little to our cynegetic tastes. In its inception it was purely a “market business”: so that, after experimental essays, sufficient to acquire full personal knowledge of the *modus operandi*, we abandoned the practice, save only as a curious survival which certainly had its own specific interest. Especially was this the case to a naturalist, since by its means there were revealed intimate life-studies of wildfowl-at-home and at closer quarters than could be attained by any other known system on earth.

[Incidentally, our Spanish fowlers’ ambitions always ran to “*Veinte pares al primero tiro*” = Twenty couple at the first shot! and they

often exceeded that. With modern and more powerful weapons, we sometimes went even further, as a few random extracts from diaries will serve to show, thus:—

- 1st January 1898—Fired three broadsides (W. J. B. and A. C.), recovering 62 + 33 + 69—total, 164 duck, mostly wigeon.
31st January 1905—Same two guns, in three broadsides, 27 + 51 + 48 = 126 duck, all wigeon.
29th December 1893—Same two guns, one shot, 78 teal, besides several coots. This was at the Laguna de Santolalla.
18th January 1894—Broadside of five barrels, 198 duck, mostly teal, also at Santolalla.]

Throughout the antecedent period, the wildfowl (never having been molested save by those rare broadsides from behind a decoy-pony) were for a time easier to manœuvre by more modern methods than they presently became; but they realised the change with all the astuteness of their race and with surprising rapidity and aptitude. Within a year or two they had become educated up to the tenth standard of perfection in ceaseless vigilance, in a suspicion that never relaxed, and a superlative wildness. After all, these are the only qualities by which any creature of value can hope to succeed in the modern Struggle for Existence. Amateur legislators please note.

The story of those earlier years and of the series of systems devised and then abandoned, or replaced by some later scheme as the intensity of the contest developed—ever a Homeric duel to assure to ourselves some measure of relative “Dominion” over such crafty opponents—all this is told in our earlier works.¹ Yet, looking back in retrospect, it is right to emphasise that whatever measure of success we attained was always (then as now) due in no small degree to the innate intuition of our Spanish fowlers into the instincts and mentality of the quarry. Virtually these men were specialists, having, generation after generation, studied the ways of wildfowl as their main source of subsistence. They proved, nevertheless, surprisingly apt at realising the changed circumstances—the totally new aspects

¹ The stanchion-gun proved a total failure.

from which wildfowl were henceforth to be regarded—no longer as merely sordid counters in a market-deal, but as worthy opponents in the strenuous struggle for Dominion—a far loftier niche. From the first they appreciated the merits of the new ideal and adapted themselves with zeal to solve (with ourselves) the various problems it presented.

Of course in a vast space populated solely by ducks and



TWO GENERATIONS OF SPANISH WILDFOWLERS.

Showing type of craft used in navigating the Marisma.

geese, literally in millions, and which at stated intervals "flight" hither and thither in the daily quest of food and rest, even a tyro might occasionally by the merest chance of luck, load up a cargo. Such fortuitous fortune, however, never appealed to our ambitions. Not pride, but honest aspirations to reach the higher levels in fowling, the artistry of the craft, soar higher. The ultimate objective should always be to exploit maximum results—not casual successes.

As already suggested, this Spanish wildfowling is based upon a broader plane and carried out on a scale that has no exact counterpart elsewhere. At first, we adopted the system

of placing lines of hidden posts athwart known flight-lines, these being usually the broad open channels, or *caños*, which traverse the marisma in all directions, and the posts concealed among samphire and other marish plants, roughly like grouse-butts. This was a device unknown to ducks hitherto only assailed by single broadsides from a masked battery ; and for



THE THIRD GENERATION.

some years succeeded admirably. But with marvellous rapidity of perception, these Spanish ducks—unlike British grouse!—came to recognise each fatal pass-way and avoided the danger by shifting their course by several miles. This defeat we sought to counter by various devices too numerous to specify in detail ; but the most effective in the end was to distribute the guns separately, often miles apart, so as to command simultaneously several of the main flight-lines in use at the moment. These being apt to alter not only from day to day, but subject to the ever-varying conditions of water, and even of

wind, could only be precisely ascertained by constant observation by our marsh-keepers—how efficiently they fulfil this service in a region where never a landmark exists to aid the eye, will presently appear.

Necessarily the changed plan involved much more labour and trials to the guns—don't call them hardships!—since wild-fowling can never be a feather-bed job. While one or two might be posted within a mile of our quarters, others had to undertake a voyage of a league or two in pitch darkness ere reaching their allotted positions. There was, nevertheless, a peculiar charm in these midnight ventures in the marisma—a sense of solitude that might be felt, only broken by strange nocturnal sounds that charm the silences; also in watching the skill of the pilot, steering an undeviating course by some star or planet (*lucero*), but always precisely striking his destination, though it be a mere point in undeterminate space—in fog, or the absence of starlight, presumably by instinct?

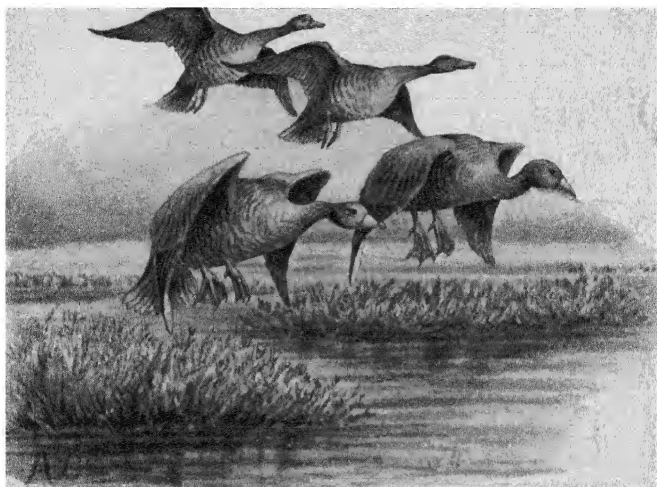
A tiny refrain comes echoing down the corridors of time—Last orders at night—in Spain (duck-shooting in the marisma)—“Huevos fritos á las cuatro”=fried eggs at four; in Norway (elk-hunting in sub-arctic forest)—“Kaffé paa seng klokken tré”=coffee in bed at three o'clock. Strenuous days?

Here is a concrete illustration from our diaries:—Before dawn this January morning, on reaching my post in the Caño Dulce, Batata proposed placing me—not in the dry and comfortable tub!—but squatting in open water 18 inches deep and 80 yards away. For yesterday, he declared, the streams of ducks had all passed at that precise point-in-space, and therefore out of shot from the *bucoy*. To my objection that there was scarce a vestige of cover—say, a dozen reeds to the square foot—Batata replied:—“If I thicken the cover here, the duck will at once recognise the change since yesterday's dawn and will shy off. They will fear less a human being in almost full view”—[that is, the fragment of him that remained above water!]—“*provided* he squats low and rigidly motionless till the fowl are right on to him.” The experiment seemed doubtful—certainly very wet! but the next three hours

proved Batata's intuition and forecast to be right up to the hilt—to wit :—69 ducks and two duckings. !¹

A similar submergence occurred when a 10-lb. greylag, shot coming straight in, took me full amidships while in the act of turning to fire at a second passing broadside on

Another instance of the almost uncanny insight of our Spanish keepers into the mentality of their web-footed charges occurred this last January (1927) to my friend, Sr Don Camilo de Amézaga. He had been watching a concentration of duck



GREYLAGS ALIGHTING IN THE MARISMA.

Take the upper pair first, leaving the nearer geese for the second gun.

at a point known as Buen Tiro which lies within sight of our shooting-lodge at Las Nuevas. All the afternoon ducks had kept streaming in, pack after pack, till the water-surface for miles was carpeted black with swimming masses, while fresh

¹ Under such circumstances, the gunner is perched on a 12-inch revolving stool, its seat being thus deep underwater. Cartridges are limited to what he can carry across his shoulders, reserve-ammunition being sometimes hundreds of yards away. Wading-trousers, waist-high, are of course a necessity.

flights still buzzed overhead like swarming bees. Not even birds-of-prey caused serious alarm.

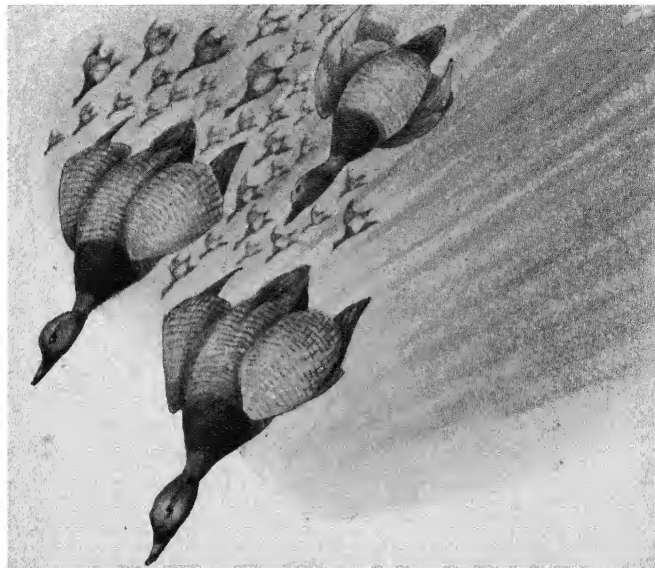
Presently Manolo Clarita (of the third generation in our employ) returned from a long day's inspection of the marisma; but bringing a bad report for the prospect of the morrow's sport. Nowhere had he found the duck "under good conditions to shoot." Camilo, perhaps with conscious pride, pointed out to Manolo the great concentration, still proceeding at Buen Tiro, and which he fondly anticipated promised a great day for the morrow. Manolo at once disagreed. His verdict was terse and apt:—"Those duck were not there yesterday. They are now in the act of establishing a new *querencia* (haunt). Give them four days and you will have a great shoot. If you take them to-morrow, you will do nothing—perhaps a paltry thirty." Camilo, however, was leaving the marisma in a couple of days and so was constrained to take the "bird-in-hand": and the accuracy of Manolo's forecast was fulfilled to the letter—the bag being thirty-four instead of five or six times that total.¹

The patience of the reader, however, shall not be abused by mere categories of slain—amazing as many are. Most British wildfowlers would be content with less in a season than, on lucky occasion, may reward a single day's work in Spain. Big as they are, recent totals, nevertheless, leave unsurpassed the record of the late Bertram Buck (killed on the Somme 3rd September 1916) who, among many memorable performances, gathered to his own gun on 17th December 1905,

¹ A noteworthy example of irregularity in Nature's seasonal distribution marked this season of 1926-7. Normally the marbled duck (*Anas angustirostris*) is a spring-migrant to Spain, arriving late in February and March, and forming merely a casual component in any winter's bag. This year they abounded in midwinter. Of 108 ducks shot by one gun on 16th January no less than 86 were of this species; while they amounted to 132 in a total of 397 ducks obtained in eight consecutive days' shooting. A month earlier (in December 1926), before the rains, a total of 1207 ducks and geese were shot in a week by two guns; but only an insignificant fraction of these were marbled ducks. A third entry in the Game-book deserves passing note. Three guns (the Marquis Santurce and two brothers) in four days secured 1157 duck, their best day realising 420.

272 ducks (of which 235 were wigeon), besides a grey goose or two. See also his Record with greylag geese at p. 239.

The following list, based on the results of three years, has a greater intrinsic value, since it shows roughly the relative abundance of the various species of wild-ducks which in winter



POCHARDS PLUNGING IN "HURRICANE FLIGHT."

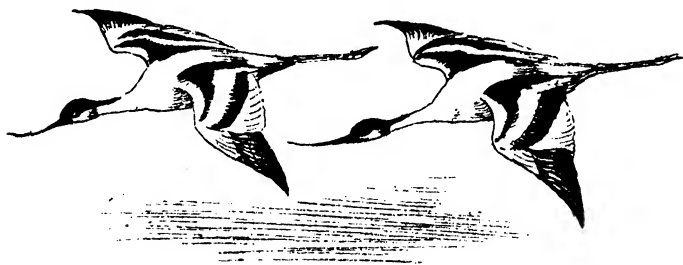
frequent our marisma. Taking 1000 as the datum-line, the proportion works out thus:—

Wigeon	.	.	1000	Gadwall	.	.	118
Teal	.	.	810	Mallard	.	.	42
Pintail	.	.	633	Diving ducks	.	.	28
Shoveller	.	.	345	Garganey	.	.	23
				Marbled duck	.	.	20

In other years the proportions have varied, particularly as regards gadwall and garganey. The latter winters in Africa, passing through Spain before our shooting begins, and returning—*de vuelta paso*, in Spanish phrase—after we have finished.

During the three years scheduled, a single red-crested pochard (*Fuligula rufile*) was included, the solitary example we ever obtained in the marisma; though (curiously) it abounds both at Daimiel in La Mancha and also at Valencia. A single white-faced duck (*Erismatura leucocephala*) also figures in the list, a weird creature that had no sort of personal right to be there: he must have lost his way—see his portrait at p. 316.

Diving Ducks.—The conspicuous scarcity of diving ducks in the marisma is explained by the fact that its shallow waters are not suited to their economy; but they abound close by—say on the deep-water lakes of Santolalla—especially tufted



duck and pochards, both of the white-eyed (*Nyroca*) and common species. When a pack of perhaps 400 or 500 of the latter, circling high overhead, suddenly shoot down earthwards in "hurricane flight" (as their habit is), the roar of wind rushing through a thousand half-closed pinions is audible a mile away. It resembles the grinding rattle of surf on a gravel-beach.

In favourable seasons our total of wildfowl for the winter frequently exceeded 5000 head. Such figures are apt to appear excessive; yet in Spain such a toll certainly does not represent so much as one per cent. of the aggregates from which it is subtracted—probably not one per thousand. In no other class of game-animal is the proportion taken by man so trifling as in wildfowl. Thus for the season of 1900-1901 our Game-books showed a total of 4849 wildfowl (4674 duck, 175 geese). Yet

on the evening of our last whole day's shooting on 15th March, we witnessed at sundown the departure, arctic-bound, of between 50 and 70 "*corros*"—that is, mobilised armies of migrating duck, averaging a thousand apiece—or, say, an exodus of 60,000 within one hour. Yet the marisma next morning was as full as ever. By comparison, our toll of 5000 was but as a drop in the bucket (see also *The Borders and Beyond*, pp. 40-42).

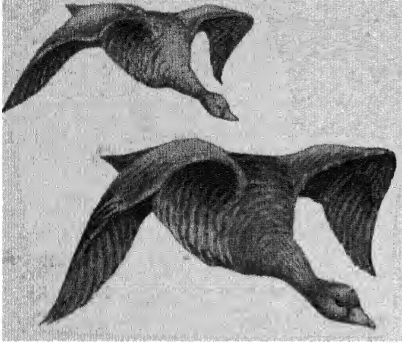
MORNING-FLIGHT IN THE MARISMA.

The initial price of joys such as these is having to turn out in the dark night-watches, to dress by candle-light, and then embark on a boat-voyage—steering by the stars—that may last from only a few minutes up to a couple of hours or more; for distances are apt to be considerable where shooting-rights extend over hundreds of square miles. My own post this particular morning was comparatively near—at the Aguas Amargas, a name probably known to quite a score of human-kind, certainly not more. It was still pitch-dark when Manuel Clarita left me in my punt, snugly concealed amid tall reeds and samphire. Soon the stars overhead began to pale and then a first faint flush of dawn bespoke the coming day. Simultaneously the solemn silences that had ruled the night began to be broken—at first intermittently, presently as by a mighty rushing wind—Euroclydon, the fluttering of a million wings as half the ducks in Western Europe acknowledged their appointed time.

These web-footed hordes, nevertheless, are wont to seek their diurnal refuges along certain specific fly-lines—varying seasonally, even daily, according to wind, weather, and water. Of these fly-lines, the narrow winding waterway of Aguas Amargas is *one*, among scores within the vast Boetican wildernesses—its existence only recognisable as a separate entity by an interrupted fringe of tall tasselled canes.

Wild Nature's Exhibition was enjoyed to the full that morning in the Aguas Amargas—as on many another. For more than an hour the opalescent skies overhead were

streaked and serried with winged multitudes hasting at speeds that have yet to be ascertained. Scenes such as these, to a Nature-lover, never pall, even for themselves alone. I claim,

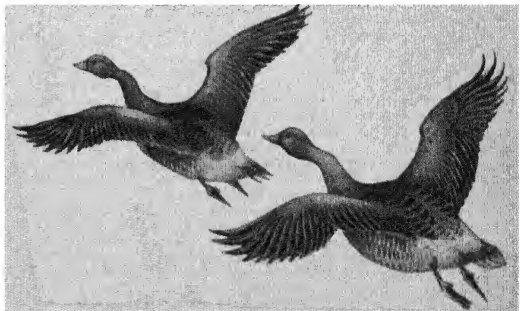


A COUPLE OF GREY GEESE,

Slightly interested in our decoys . . . but

however, no exclusively platonic interest in wild-fowl, and the keenness to annex a share of these night-fliers stands merely in inverse ratio to the skill required to secure that share. That morning (as oft hapt) I succeeded best while it was yet so dark that ducks were almost atop of one ere they were seen, and nothing remained but to snap an instant shot

at sight—*un tiro precipitado*, in Spanish phrase. Later, when one could descry their coming afar, extra deliberation may sometimes prove fatal! There is an indefinable *something* about incoming ducks as seen thus in the half-light—a quality that seems sinister, almost menacing. The outline of 1000 ducks thus hurtling in one's face presents a kaleidoscope of rigidly angular figures, hardly two quite alike; yet each separate unit obviously instinct

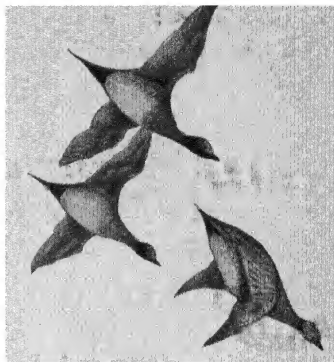


. . . promptly recognise the fraud.

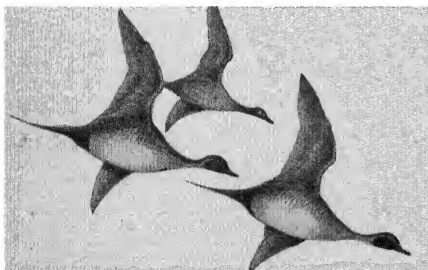
with an electric energy to shift course or altitude that defies a halting aim. There is neither time to halt nor aim. Personally I am still proud that, during long years in Spanish marismas, I managed to scramble into the sparse ranks of "centenarians"—those, that is, who have killed 100 fighting

ducks in a morning: though on the first occasion, I recall, that pride was considerably discounted by my dear old friend and co-author, B., cynically remarking that I had "fired enough shots to have killed 200"!—nor will I deny it. B., however, was a phenomenal all-round performer—thrice (I think it was) "champion of Spain" at the traps—besides, as I remember, that particular morning he had himself had an unlucky post!

Now it is ten o'clock . . . for twenty minutes not a duck has flown. The flight is over and such is the silence that reigns around my post that Dwarf water-shrews, hardly bigger than bumble-bees (*Pachyura etrusca*; in Spanish, *mogoños*), are now nibbling at the samphire-buds within a yard. Presently Manuel returns to collect the spoils—53 ducks of seven species, and a couple of greylag geese right-and-left—and set them up, with marsh artistry, as decoys for the



WIGEON DROPPING TOWARDS
DECOYS (SPAIN).



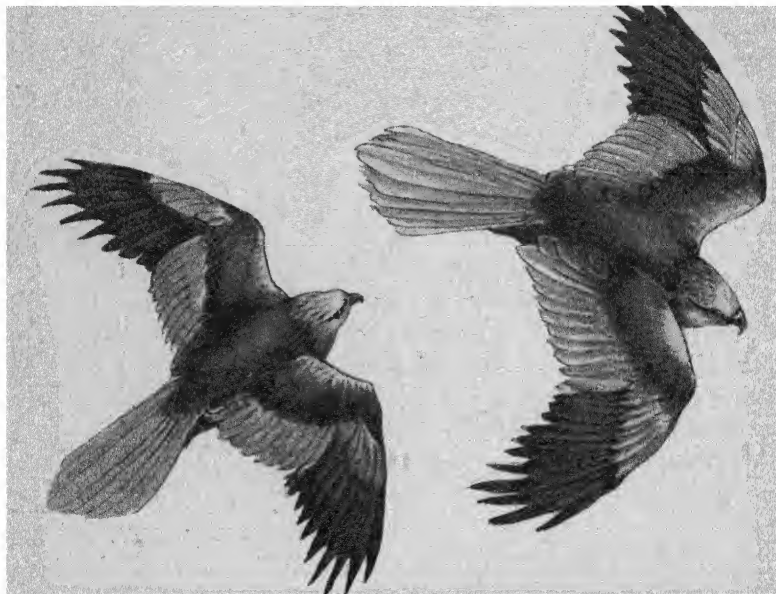
PINTAILS ESPYING DECOYS (SPAIN).

midday shoot. But that is another story. At the moment the one predominant sensation is that, having been afloat for six hours, a crying hunger has set in. But that breakfast on red mullets and a *tortilla*, washed down with divine Amontillado, is a feast worthy of the lesser gods.

By eleven o'clock we are again left alone in that sublime solitude; but now a fleet of decoys, half encircling the post, floats as naturally as ducks ever swam—almost you can see them feeding, indeed a few are "turned up," heads-under! Now at home, once the

morning flight is over, wildfowl are wont to rest quiescent at whatever spot they may have selected for their diurnal retreat. There may be no further movement till towards dusk. Why then, in Spain, should they keep on fighting during the daylight hours?

One reason is clearly hunger. As explained by our keepers,



MARSH-HARRIERS. Adult males—the pale blue on wings and tail almost translucent in Southern sunlight.

(This particular sketch made at Lake No, White Nile, Sudan.)

there is always, amidst such multitudes, a certain proportion that, by misadventure, have failed to get a full feed at night, and these can't stay empty all day. A second visible reason is their disturbance by birds-of-prey—chiefly marsh-harriers, since both buzzard and kite confine their hunting rather to the woodlands and dry cistus-plains; eagles, however, claim a systematic toll, chiefly upon the gecse. That gun-firing before dawn conveys a signal to every marsh-harrier within miles: nor is it attributing too much to their keen intelligence

that they directly connect the matutinal shooting with a probable supply of easily-caught cripples. Already in the dawning light one descries their ghost-like forms drifting to and fro in the gloom—not a dead duck will float a trifle beyond gunshot, but is promptly snatched up and carried away. Later on, wherever these big hawks descry a moderate-sized band of fowl afloat—(not the main bodies, which may cover miles of water)—by repeated feints they put the ducks on wing, in order to see if any “casualties” remain behind. This process goes on all day, and the disturbed duck, seeking safer quarters, may perchance espy our fleet of decoys—all feeding so peacefully!

This duck-shooting to decoys is apt to be the snappiest of snappy work. Far away, a passing pack may be seen to be half attracted . . . they shift course and head in . . . tentatively . . . at perhaps 100 yards they decide definitely: then, on half-closed wings, set at rigid angles, sweep directly downwards at terrific velocity. But never will they reach the decoys. Their keen sight *always* detects the fraud; though not always are those ducks are *only just* within range. The crucial point for the gunner is to snap them the moment they arrive at that point. Otherwise, by a simultaneous impulse that is quicker than human thought, every unit of their company will be shooting separately skywards—like so many rockets—all on diverging lines and at a speed beyond this gunner’s power to arrest—save when some rare flash of genius inspires a lightning stroke!

Many interesting incidents in wild-life come under the eye of the naturalist-gunner in the marisma—some well worthy of more detailed record, but for the exigencies of space. There is, for example, that strange habit among certain ducks of forming what our Spanish fowlers term “magañonas—obviously of sexual impulse, but untimely in mid-winter. Then, far more important, there occurs in March that final massing-up into “corros,” or organised armies, preparatory to their final departure for far northern latitudes. This latter feature affords as striking and as instructive an insight into the life-history of these web-footed tribes as anything that has fallen under our

observation ; but both phenomena have already been described in detail in our earlier works and both will repay perusal.

[Eagles, as above indicated, have occasionally attacked our decoys in the half-light of dawn. We have shot both the imperial eagle and



BONELLI'S EAGLE (*Aquila bonelli*).

A mountain eagle which harries the marshes and lowlands in winter.

Bonelli's eagle thus. But it is remarkable that two of the rarest of the eagle-tribe in Spain should have been secured in this manner. The first was a Sea-Eagle (*Haliaeetus albicilla*, the sole recorded occurrence of that species). Before daybreak, on 28th December 1898, this great eagle pounced down on our wooden (!) decoy-geese and lost its own life—a female, weighing 12½ lb., and with a wing-expanse of 8 feet.

The second was a Spotted Eagle (*Aquila nœvia*), shot under precisely similar circumstances in December 1918, and now in the collection of the Duke of Medinaceli at Madrid. The only other known instance of this latter eagle occurring in Spain is that recorded in *Unexplored Spain*, p. 398. Both these examples were heavily spotted].

TEAL.

The aggregations of these little ducks that each winter congregate in the Boetican marismas overpass all numerical computation: yet even to us wildfowlers, accustomed to see them year after year, their astounding totals are hardly fully revealed save on such occasions as the following:—

At daybreak, on 11th February 1907, my post was near the centre of the 400-yard channel known as El Traverso; but a sudden westerly gale just before dawn had swept the water bodily away to leeward, leaving me stranded in a wilderness of wet and sticky mud. Some wondrous spectacles evolved—the manœuvres of a dozen vast bodies of teal—say 10,000 in each!—coming along in separate armies, yet each hesitating to risk the passage of that dried-up channel. Again and again these revolving clouds doubled and re-doubled upon each other; waltzing, as it were, to and fro across the margin of open water, and each in turn instantaneously changing course as by a single impulse—simultaneously, of course, changing colour as well as direction—sombre black changed in a flash to glittering silver—whirling clouds of rushing atoms, rending the air with a noise like distant thunder. At length one huge army, taking courage in their pinions, braved the passage of El Traverso, but passing far beyond shot: then a single peregrine falcon, feinting in pure mischief, put the whole ten-thousand to rout and the discomforted host wheeled back past my ambush. How many fell to the two barrels I could not count: for after collecting eighteen, in kneedeep mud, I was too exhausted to pursue further, though as many more cripples remained within view. Nature, however, had her own specialised retrievers in attendance. The peregrine disdains a prey at second-hand; but half-a-score of marsh-

harriers found the opportunity they had awaited all the morning. Fang and talon give short shrift. Within thirty minutes naught save bones and feathers remained. That was my only shot all the morning.

[A rather startling scheme is on foot in Spain involving the reclamation of the entire marismas of Guadalquivir, with the object of growing cotton on a large scale. Should the project succeed, many millions of wildfowl will need to find fresh quarters elsewhere—if such exist. One recollects, however, similar schemes that either failed to fulfil anticipation or led to totally unexpected results. Thus on the neighbouring marismas of Guadalete an enterprising attempt to produce sugar from beet resulted in heavy loss, owing to the soil being impregnated with sea-salt. Salt and sugar seem obviously antagonistic; but possibly the cotton-plant may appreciate a saline ingredient? The curious result of another agricultural venture is related in *Unexplored Spain*, p. 324. A vast extent of low-lying salt-marsh known as the Calderería, near Valencia, belonged to the three adjacent Communes of Sueca, Cullera and Sollana: and in 1850 the enterprising peasant-proprietary bethought themselves to turn their waste domain to profitable purpose by enclosing it against the sea, flooding the interior flats, and cultivating rice. In its original inception the scheme succeeded admirably: but no sooner had those leagues of rice-fields materialised, than they attracted ducks—always abundant there—in such extraordinary quantities that the shooting-rights presently far exceeded in value any possible revenue from rice! Hence, though the cultivation of rice is still carried on, it is merely a subsidiary objective, and the eyes of those peasant-communes are mainly fixed on their thumping sporting-rental!]¹

¹ The whole huge area is mapped out into shooting-posts—like the squares on a chess-board, each “square” being let by auction annually, and the best commanding as much as £100 rental. Shooting is restricted to certain fixed days (about three a month), the regulations being rigid, and rigidly observed. Between twenty and thirty thousand head have been killed in a single morning’s shooting.

CHAPTER XIX

MY ONE DAY IN A SCOTTISH DEER-FOREST

AN IMPRESSION OF THIRTY YEARS AGO.

NEVER before that day had I set foot within the sacred precincts of a deer-forest. The sum-total of my knowledge of the Scottish red stag was limited to the three or four weeks immediately preceding, during which we had been shooting on one of those grouse-moors described as "occasionally frequented by deer." Well, the deer came all right; appearing conveniently enough, just as we had completed our grouse-limit, about mid-September, and some delightful days they afforded. They were only small beasties "on the wander": yet they left an impression that the Highland stag must rank in the first flight of big-game. Hitherto my experience with these had been exclusively in foreign lands—in Norway with elk and reindeer; in Spain with ibex and boar, roe and red deer; and with all these the Scottish stag compared favourably. In keenness of vision, in ceaseless vigilance, and general astuteness, the Scot would be hard to beat—not that I esteem the sight of any wild-beast as necessarily superior to our own; though in other senses they outclass us many-fold. There is, nevertheless, one feature which forms well-nigh a fatal handicap to our Highland friend, as will presently appear.

Most kindly my landlord of the grouse-moor aforesaid, realising how much I had appreciated this informal introduction to Scottish deer, had suggested my visiting a deer-forest proper, which was also in his hands, so as to give me a glimpse, as it were from Pisgah, of one of these paradises of the Highlands.

Having some twenty-odd miles to drive—this was in the Victorian era, long before the advent of motor-cars and cordite—it was eleven o'clock ere, with the head-forester, Matthew

Ross, we took the hill; nor had a couple of hours elapsed ere I had learnt much and received many a new impression. The first was the unwonted abundance of game. Never before had I seen, or dreamt of seeing big wild animals featuring a whole broad mountain-landscape. This, I ought to add, was before my African years, and surely nowhere else in Europe can such sights be seen? Elsewhere the pursuit of big-game had meant (for me) a matter of gravest emprise: the very access to it—even to its presumed habitat—had involved laborious journeys by sea and land, trekking for scores of miles through pathless forests, then scaling thousands of feet of snow-clad sierra or fjeld, taking nothing but what one could carry. Discarding comfort, ease, in fact all the ordinary amenities of life, one relapsed, *pro tem.*, into elemental man. Yet it was worth it—worth it tenfold! Shortly before, in 1897, I had published *Wild Norway*, in which my averages, over a long series of seasons, read:—

For every bull-elk killed in the Northern forests—	
rather over	9 days' work.
For every reindeer killed on the high fjeld	6½ „ „

Thus a single right-and-left comes to represent the equivalent of a fortnight's hard campaigning!

Scotland demands no such sacrifice—no sacrifice at all! Here we had the game at our doors; groups of them everywhere adorned the hill, while the incessant roar of challenging stags resounded across the solitudes—the date being 12th October. For awhile we merely walked warily, keeping a trifle under the hill, but ever spying, spying. The ground was only moderately rugged—certainly not stupendous as are some Highland forests. Here it was heather-clad to the tops, not essentially different from our wilder Northumbrian moors, though the peaks of loftier hills (some already snow-patched) fringed the horizon.

The forester appeared taciturn—possibly he thought that I was taking-in each point, untold—as he did himself; but that, on a first day's experience, could hardly be the case? So presently, very tentatively, I ventured to point out a stag

which, by comparison with the poor little beasties already shot on our grouse-moor, seemed to carry a forest of points. Tersely, as he closed the glass, Matthew remarked, "Yon beast's only 14 stone." A new light dawned and we relapsed into silence. . . . Presently, greatly daring, I could not resist drawing attention to another splendid head. "That beast's run," was the even briefer verdict this time; and a sense of having exhibited some gross ignorance left me speechless, not to say ashamed! (*Why*, I knew not.) Our advance continued in unbroken silence. An hour elapsed.

It was now friend forester's turn to take the initiative. With a sudden accession of real enthusiasm (which I had hardly anticipated) he pointed out a lone stag which had just shown-up over a sky-line about a mile away on our left front. . . . True, my eyes had never but once in my life before, focussed on such a beast, and that once in Spain. Quite abnormal he looked, as regards sheer length of horn; but never an antler graced these great naked shafts! In a word he was a switch-horn. Now all my hopes and ambitions that day centred on securing a trophy that fairly *bristled* with ivory points—a switch-horn, be he the biggest ever made (as Matthew *swore* this one was) appealed not at all. Poor Matthew's disappointment was deep and obvious. "Never in all his years had he seen a beast the like o' yon . . . it was just a slice of Heaven-sent luck that threw such a chance across my path. . . . Sure, I would never be so mad as to throw it away?" But no appeal availed. An impassable rift had opened between us—I felt it and grieved. The situation recalled more than one similar intransigency far away on the Roof of Norway, when the inmost soul of good old Lars or Knut would be concentrated fiercely on *meat*—meat, lots of it, and close at hand; whereas my own ambition soared far away to that vision of vast antlers actually within sight, but still beyond range. One such heart-rending episode will be found recorded in *Wild Norway*, pp. 37-8. . . . About every seven minutes during the next hour, Matthew whispered. . . . "There's the switch still in sight," . . . or, "Man! See, he's going down

into the corrie . . . a gran' position. . . . We can get right atop of him now!" From sincere sympathy one solution *did* occur:—"Matthew! I'll shoot that great ugly beast *for you*, and then get a proper trophy for myself?" No, that oracle wouldn't work. The limit for the forest was fifty stags and already forty-nine had fallen. The *impasse* was complete, beyond the power of words. Silence resumed her reign.

Then the *miracle* occurred—Miracle No. 2. For the second time Matthew's spirits soared aloft like a sky-rocket—he had spotted something New! . . . Yes, by all the gods, there he was, after all, the very Lust of my eye—hope renewed when already half-abandoned—a true Royal stag with a glorious spread of antlers, and even in length of horn hardly, if at all, inferior to the despised switch. At first, the stalk presented neither incident nor special difficulty until we had reached a point within some 400 yards of our quarry with his harem of a dozen hinds. Beyond that point not another inch could we advance by reason of another stag—an 8-pointer, with a numerous retinue—discovered lying asleep in an intervening hollow. There we were constrained to lie, inactive among the heather, in hopes that the intruder might awake and go. He did neither and the afternoon wore on. At length, I suggested our withdrawal, leaving the Royal undisturbed, and returning hither with the first of the morning's light. No, that plan was negated at once. "I've been on the hill every day of the season," replied Matthew, "and never before seen a stag the like of yon. He's a traveller and by the morn's morn may be forty miles away. It's now or never." . . . Another half-hour passed. The light was beginning to fade. I tried another gesture! "Matthew, not being gifted with crepuscular vision, unless I can get a shot within the next half-hour. . . ." Then a fresh light was vouchsafed. "D'ye no ken that yon beast's just going *down the ravine*? Half the hinds are intil't already and the rest are making to follow" . . . a pause: then, "Can you *run*, when I give the word?" . . . "Run? Aye, like a redshank." *N.B.*—This was thirty years ago. But the "ravine"? Remember that I had not the faintest suspicion

of there being a ravine at that spot, nor was any evidence of such a geological phenomenon indicated from our point-of-view. Implicitly, of course, I accepted the thrice welcome information. Five minutes elapsed. "*Jump*," said Matthew, and we jumped. We must have covered 300 yards out of those 400, what time a trained sprinter would have done the quarter-mile. Then the *triple tops* of those great antlers appeared slowly emerging from the gully. Close in front was a heathery hummock and upon this I flung myself flat on my chest ere yet the stag's whole head had appeared.

Here I ought to interpolate that my brother W. and the gillies, whom we had left a mile behind, afterwards declared that from the moment we began our run, the whole hillside above was *amove* with galloping deer—"like the beasts coming out of Noah's Ark!"

Well, our great stag disdained to run. Majestically he moved forward to another hummock and, from the top of that, gazed deliberately around to ascertain what all the commotion meant. The scene at that moment passes any words of mine to convey; but remains engraved for ever on the tablets of memory—that noble stag, standing high and four-square on his hillock, his brave figure outlined *quadrado y esquinado* against the afterglow of a setting sun—not Landseer himself can have envisaged a more imposing sight.

The distance was 90 yards and the .450 bullet struck fair on the point of the shoulder. That stag never felt a pang. He carried his full Royal rights and his horns measured a yard in length, all but a paltry quarter-inch—a vulgar fraction! The circumference above bey was $5\frac{1}{2}$ inches and the spread inside $25\frac{1}{2}$ inches. But are not all these details chronicled in Rowland Ward's *Records of Big Game* (4th Edition), wherein my one Scottish Royal ranks twelfth in the list for all Scotland, posing alongside the trophies of the mightiest and noblest hunters of the Highlands! Truly for a man out on his first day in a Scottish forest to encounter two such exceptional specimens was the sort of luck one may dream of, but rarely realise?

While the gralloch proceeded, Matthew suggested that my brother and I should go down to the Lodge and send up a

pony. Now we had been rambling hither and thither in quite unknown country for some seven hours, and had not the faintest idea either of the direction of the Lodge or of its distance. "Oh, just hold for yon rocks (some half-mile away) and you'll see it right below"—which we did. Just as we had finished dinner, Matthew's face, wreathed in smiles, appeared to announce—"The stag weighs 17 stone, six." Again, I had not till then realised the importance attached to weight.

Since the day above immortalised (?), the ebb and flow of the tides which agitate even lonely backwaters by which we both rejoice to dwell, have rolled Matthew Ross and the writer together again and in January 1926 he wrote: "I retain most pleasant memories of that day and can recall every incident of our 'Royal' stalk"—a remark from a stalker of his life-long experience that encourages hope that the yarn may be worth the spinning.

Now, it will be self-evident that, *alone*, I could not have brought about the downfall of that stag—alone, that is, without the aid both of Matthew Ross and his exact topographical knowledge of the lie of the land and, in particular, of that friendly yet invisible ravine. That is the handicap above referred to, from which the Scottish stag suffers. In those bigger, foreign lands, where the terrain is unknown and where boundaries do not exist or are indefinitely distant, no such handicap bewrays the quarry. Each individual stalk is upon new ground which the stalker has never seen before, nor will ever see again. Each venture must be exploited on its merits—as one sees them—and no local knowledge is available. Thus, in the midst of a promising venture, some totally unsuspected obstacle may confront the hunter and deny approach. It may be some tearing torrent deep down in a gorge; a narrow lake, both of whose extremities vanish round unseen corners; or a sheer gullet, a glacier-face, or other geological obstruction, to pass which would involve giving the wind to your game. On the other hand, upon ground every acre of which is familiar—if not to the stalker himself, at least to the keeper-in-charge—the beautiful Art and Craft of stalking is proportionately

simplified, while the danger to the game is enhanced in corresponding degree.

One month earlier, this fact had vividly impressed itself on me during my first stalk upon the grouse-ground above-mentioned.

Before us, about a mile away, a wide conch-shaped hollow was scooped out of the hillside—a sort of amphitheatre—and on a rocky ledge midway up the farther face, lay three deer, facing downhill. The keeper, George Innes, knowing that I had had some experience overseas, paid me the compliment of asking how the game could best be approached. Already I had worked out my own scheme (which involved a considerable detour) and explained it. “Very good,” replied George, “but won’t that be rather a long shot? . . . nearly 100 yards (see footnote) . . . what do you think if we advanced *up this burn below us*, and then crept up the hither slope?” At once I realised several things—amongst others, that if there *was* “a burn below us” (which we could not then see), it was clear that we could *walk erect* to within 50 or 60 yards of the deer; then a two-yard crawl would finish the job. So it fell out. Having *walked* right up to my mark, a yard’s creeping brought the tops of the three pairs of horns within sight. They were then in profile; yet ere, by chameleon-like movement, I had raised myself to shooting-position, all three were full face! I only name that incident because it bespeaks a quality of vigilance which it would be hard to surpass? Next moment all three were on their legs; but they hesitated long enough for me to pick out the biggest—distance 55 yards.¹

In this instance my own scheme would probably have proved equally successful; but how vastly that local knowledge had facilitated the approach?

¹ Fifty-five yards is unnecessarily near to approach big-game. At that short distance not the slightest movement will escape their perception. Even with the old “express rifles” of those days (black powder), a range of 100 yards was quite near enough: and the invention of “cordite” has practically doubled the flat trajectory. With cordite, a range of even 300 yards should be as safe as one with black powder at 100. There are rugged hill-countries where the use of cordite almost eliminates the necessity of stalking at all.

CHAPTER XX

COMMUNISM IN WILD NATURE

IN the Realm of Wild Nature, few phenomena are more striking or more instructive than the perfection to which Communism—meaning organised co-operation for the common good—had already attained in far prehistoric ages. Its precise origin and evolution, however, can never be told in detail, since the system was in complete working order eons before Man appeared on the scene. It is, nevertheless, primarily noteworthy that Communism only attained a full development among the lowlier and more feeble types in the scale of creation—such, for example, as bees, wasps, and ants. Thus Communism presents a curious paradox—this complex machine, infinitely lower than human, yet co-ordinated by some of the humblest of created types to a perfection beyond what we have yet reached ourselves . . . or (not being insects) will ever reach.

The particular creature which primarily inspired these Notes is neither a bee nor a wasp—not even an ant, properly so called; but belongs to a yet humbler type of creation far lower down in the Social scale—a mere plebeian of the Order *Neuroptera*, akin to the ant-lions, lace-wing flies, and that ilk. My lowly friend is the *Termite*, or, as universally miscalled throughout Africa, the “White-Ant” (*Termes bellicosus*), a typical Communist. Now the termite, as a unit, ranks among the feeblest of living creatures—a poor flabby, defenceless atom, stone-blind (save during a brief winged stage), and of entirely subterranean habit: yet the united labours of this insignificant hermit have literally transformed the face of the African Continent. From Cape Colony northwards to the Sahara, the African landscape for 3000 miles is characterised by “ant-hills” of every conceivable size and shape—from mere mounds like

molehills up to huge pyramids, castellated structures, or pinnaced peaks tall and straight as factory chimneys. Many are conical or cylindrical in outline, others may resemble giant mushrooms or present an appearance like huge sea-anemones, each branching arm hollow and terminating in an open cavity, like so many rabbit-holes. But, great or small, all are compacted solid and firm as if of reinforced concrete.



ANT-HILL OF THE BRANCHING TYPE. CHEETAH "STANDING BY."

Whoever traverses Africa must see these ubiquitous objects. The majority of passers-by simply accept them as "ant-hills" and inquire no further: others limit their attention to subjects of more direct—or prospective—profit, say gold or diamonds: a third section to personal ambition in the shape of "record heads" of big-game—*sua cuique voluptas*. Yet these ant-hills and their unseen architects present a psychological object-lesson of the first rank. Twice already I have briefly alluded to it:—First, in *On Safari* (p. 258), while blindly groping in the dark to discover some explanation of its meaning: secondly, in

Savage Sudan, after chancing on some slight opportunity to observe for myself the secret operations of the termite. Any notes of mine, nevertheless, are but superficial scratchings on the surface when compared with Dr Henry Drummond's close researches into the subject and the charming description given in his *Tropical Africa*. No one, I assume, will read my bald observations without having previously studied the masterly work just cited: not to mention in addition, Lubbock on bees and ants, Darwin on earth-worms—each a real romance in Natural History.

It forms no part of my plan to enter into the life-history of the termite; but certain outstanding features must be specified—three in particular. First (as already stated), this lowly insect is among the feeblest and most defenceless of creatures: secondly, his oily flesh is sought as a supreme luxury by well-nigh all his savage neighbours—whether human, furred, feathered, or scaled. Thirdly, and consequentially, the mere appearance of a termite in the open virtually connotes his instant death. Nevertheless, he succeeds, by the sheer power of Communism, not only to defeat the wiles and the appetites of countless foes, but actually transforms the whole face of the African Continent.

The chief food of the termite consists of dead wood, and to obtain a sufficiency of that innutritious diet—having due regard to their own safety—his organised hordes overplaster with a film of desiccated earth every tree and shrub, great or small, alive or dead, throughout thousands of square miles. Dead trees, of course, yield an assured harvest: the living are encrusted, as it were, “on speculation”—that is, on the chance that perhaps twenty, thirty, or forty feet aloft, there may be found a few dead branches. To reach these prospective aerial treasures *unseen*, a cemented tunnel is laboriously carried upwards, piled grain upon grain up the living trunk and along each lateral limb—each tree tessellated with a labyrinth of tubular “upcast shafts” within which the termites can safely reach their allotted subsistence. Thus within a relatively brief space of time, every dead tree and every dead limb on a living

tree has been—first encrusted—then devoured. As Drummond humorously remarks, if a man lay down to sleep with a wooden leg, by morning it would be reduced to a heap of sawdust!

One gigantic result ensues from lilliputian labours—though the termite himself never considered or anticipated such effect. Daily, hourly, throughout Africa, vast masses of the exhausted subsoil from below—counting in the aggregate into millions of tons—are being transferred, grain by grain—and by insect-agency—from deep underground to the tops of the tallest trees.

Presently this refreshed subsoil, having served the termites' immediate purpose, becomes disintegrated by the action of sun, rain, and wind, and thereupon is scattered and spread over the whole superficies of the earth, reinvigorating and renewing its fertility. The service that the earth-worm renders in our Temperate Zone, that the termite accomplishes in the Torrid. Each of these lowly creatures in its sphere performs operations beside which the sum-total of our human agriculture and husbandry compares but as child's-play. Without the aid of these two unseen and unthanked husbandmen, the very sequence of plant-life on the earth would be imperilled—and the loss of plant-life connotes that of *ALL* life.¹

Colossal as are such results, it follows that the causes whence they spring must be correspondingly so. For it seems well-nigh incredible that the lowliest types of creation should exert powers that rival or surpass those of all the rest combined, including our noble selves. First it may be noted that these humblest of insects boast an age-long lineage. Already the termite was inaugurating his schemes of Communism in remote geologic period, ages before his social superiors, the bees, wasps, and ants appeared on this Planet. As for Man he is, by comparison, a mere upstart of yesterday. During these

¹ *THE MOLE*.—Is not our homely mole, in degree, an equally worthy husbandman? In cultivated gardens, beyond a doubt, the mole is a detrimental—like pheasants and rabbits! But in the open country outside, the mole is fulfilling the same useful function that earth-worms perform in the Temperate Zone, termites in the Torrid. Such, nevertheless, is the power of custom—its centripetal force—that, although holding this conviction, I continue contributing my quatum towards the village mole-catcher!

unrecorded ages the termite busied himself learning the lesson of Communism, learning to co-ordinate efforts, methods, and forces-in-the-mass into practical working "republics," organised on a scale and with a perfection of detail that far surpassed in elaborated efficiency any human institutions, whether of this or any future age. Insect-instinct, in short, has left human intellect, "unplaced." Why? Well, this is merely one component part in Nature's complex scheme. Even insects enjoy their allotted advantages, as we do ours; but advantages in the Lower World involve grave drawbacks. Having neither intuitive forethought or reasoning power, these insect-tribes act entirely as automata—a character which lies wholly outside our human conception. A human automaton is either a slave or an imbecile.¹

The termites have always had their kings and queens—an institution that appears repugnant to Communistic ideals in human aspect. Termite royalties, however, differ from human rulers—whether constitutional or autocratic—in the essential particular that they alone of the community are sexually complete. All the rest, including their vast armies of workers, their drilled and professional soldiers, their personal servants and slaves, guards of honour, and the whole equipment of a regal administration—all these are *neuters*, all mere automata: each class, nevertheless, adapted by specialised change of form—that is, by polymorphism—to fulfil the precise function allotted to it. These functions, great or small, are executed without semblance of friction or internal dissension. For the termite knows neither jealousy nor ambition; he enjoys neither initiative nor enterprise; hence his ordered community needs neither parliaments nor written laws—neither rhetoricians, trade-unions, nor differentiated wage-scales! Each member works uniformly in its own sphere and to the utmost of its physical capacity; all

¹ Ants, nevertheless, are more than mere reflex automata. Their methods in some instances are obviously based on senses differing only in degree from human motives, and suggesting both a sense of memory and the power to apply it in practice. In Tennyson's words, "Ten thousand things are hidden yet, and not a hundred known."

work equally for the common good; and all share alike in the produce of their joint labours, without regard to profits or to property. The Communistic ideal seems fulfilled to the letter.

"Sic vos non vobis, mellificatis apes."

Here it should be added that many of the functions allotted to this or that section of the organised community are so intricate as to appear well-nigh incredible, *unless* we are prepared to credit this insect-world with a degree of intelligence certainly not inferior to that of a majority of our human race. Who, for example, would ascribe to the honey-bee an expert acquaintance with scientific chemistry? Yet that astute insect designedly inoculates its stores of collected honey—(its "capital")—with *virus* (formic acid) from its own sting in such calculated proportion as to prevent undue fermentation! And the still lower termite, with many other insects, oft display a degree of technical intelligence hardly less conspicuous. The border-line between instinct and intellect is hard to draw.

Incidentally, it may be noted that although, in the termite commonwealth, the king and queen alone stand exalted above the vulgar throng, yet no one in reason will envy them their royal status. The king, it is true, may enjoy transient moments of delirious delight ere his ephemeral existence is cut short—by murder! The queen's share of mundane joys is even less perceptible, being confined to ceaseless child-birth! A bloated, sausage-like figure, immobile and repulsive in its obesity, her majesty has been described as attaining the maximum known power of reproduction, her output of eggs reaching 60 per minute, or 80,000 a day. Surely that is an inert and eventless existence, merely to pour out eggs by the thousand, daily and hourly? Meanwhile, however, the queen is sumptuously fed—on sawdust!—by whole crowds of dutiful retainers; while other crowds are ceaselessly employed in carrying off the "output" to the royal nurseries—which the mother never sees! Royalty among the termites can hardly be regarded as an ideal life?

And what of their subjects? of the toiling millions employed in plastering the trees of the African forest, or building earthen

pyramids and fortresses right across the length and breadth of the Continent?—Fortresses strong enough to resist the attacks of every enemy, except alone the ant-bear and the pangolin, both powerful animals specialised for such sieges. Surely theirs is the very nadir of life—the dullest, dreariest, and most drab of conceivable existences—the acme and the apex of monotony? True, they have their “daily bread” . . . their daily toil . . . that is all—an existence devoid of ideal or incentive, devoid of enterprise, of ambition or initiative, devoid even of the “joy of life,” with all that that expression imports—each individual a helpless drudge, a mere mechanical unit driven to complete a daily “tale of bricks,” and sharing in return a daily sufficiency (of sawdust)—that and nothing more.

Surely that is a graceless life? . . . *propter vitam vivendi perdere causas*. Is it a millennium such as *that* which human Communists crave, and for which red-hot rhetoricians preach revolution, bloodshed, and the subversion of society? Doubtless some of these hot-heads are honest enough in their convictions; but have they ever considered their thesis in the lime-light of Nature’s teaching? They may yet, as Dr Watts suggested, learn a lesson from the ant. Is it conceivable that prehistoric lines of life that pre-eminently fulfil the requirements of lowly automata such as bees, earth-worms, termites . . . will equally subserve the needs and the advancement of modern man . . . of *Homo sapiens*?—that the sum-total of human happiness and civilisation will be benefited by a reversion to the instinctive methods of insects and reptiles?—even of molluscs? Such a proposition ignores the eternal difference between mechanical instinct and reasoning intellect.

Thousands of years ago we have it recorded on the highest Authority—and contemporary experience corroborates the fact—that, while one man possesses but one talent, or perhaps five, another is gifted with ten. In these latter days that disproportion has probably been gravely accentuated by the process of evolution and the stress of our modern “struggle for existence.” Men, as men, never were equal: to-day the disparity is yet more and more pronounced, as mutual com-

petition grows keener. In the insect-world all are equals, all automata; neither competition nor differentiated talents trouble an Eocene mind.¹ As Solomon wrote:—"Ants have neither guide, overseer, nor ruler."

In the ideal Commonwealth contemplated by Communistic dreamers, the wage-level could not remain at the rigid level that satisfies a termite, simply because men are not all cast in an equal mould, as ants are. Men differ individually—whether mentally or physically. Very nearly may they be—on paper—reduced to "counters" by devious devices, such as caucuses, trade-unions with "card-votes," and the like. But that is surely a sorry analogy, that uninspiring spectacle of millions of men (with a small *m*, please—almost I had written "men-molluscs") mechanically degraded to a virtually vermicular status—mere "cyphers who count one on a division"? Herein we may detect the apotheosis of Communism—a cunning device to displace human freedom with a speciously devised tyranny, the like of which civilisation had not seen before the present ingenuous generation. Brains, nevertheless, will always differentiate. That is where the "talents" come in, be they five or fifty. Our glib-tongued orators, the "tempestuous windbags" of Mr Ramsay Macdonald's phrase, themselves would take special care to get their extra percentage. Personify that honey-bee who first discovered the chemical process of preventing fermentation—would he not promptly have secured

¹ The following analysis, showing the varying degrees of human mentality, may be both pertinent and instructive. It represents the result of tests applied by the United States' Authorities to ascertain the mental abilities of 1,726,966 men enlisting for service in the War.

Class.	Quality.	Per cent.
A . . .	Very superior intelligence . . .	4½
B . . .	Superior . . .	9
C <i>plus</i> . .	High average . . .	16½
C . . .	Average . . .	25
C <i>minus</i> . .	Low average . . .	20
D . . .	Inferior . . .	15
E . . .	Very inferior . . .	10

Extracted from *The Caveman within us*, by Wm. J. Fielding, p. 223.

the profits of his invention under "letters-patent"? Thus at once would recommence those terrible evils—the curse of "Capitalism," royalties, and all the rest . . . disgusting perquisites that tub-thumpers delight to execrate; but which they, and everyone else (Bolsheviks included) equally delight to possess—so they have the brains to secure them.

Throughout Wild Nature, one may recognise this principle of "Capitalism" in being—say the storage of nuts by the squirrel and dormouse, or honey by the bee. Some of the lowliest types in creation, equally with the higher, are true Capitalists in that sense. A Communistic world could not subsist save by the subversion of one of Nature's primary principles, the Survival of the Fittest. Should such insanity ever materialise, we should at least witness the curious experiment of enthroning the "Survival of the Unfittest," since intellect would then be assessed in terms of quantity rather than of quality. But the set order of Nature precludes things which are unequal being reduced to the level of a Least Common Denominator.

Human evolution pursues devious courses. A prehistoric age knew the Caveman. Mediæval periods witnessed the slow dawn of civilisation—the sequence of great empires (and of great men), of ordered progress. Is the next phase to see the Caveman "resurrected" as a mass-man—that is, a sort of mechanical marionette guaranteed to re-act by the million to the pull of a string?—the individual merged in the mass? With sweet simplicity, ten millions think as one. A Socialist M.P. has told us that the mere sight of a man who could act independently and use his own judgment, "made him sick." Should that be the Millennium, may some one else be there to see.

VESTIGIA NULLA RETRORSUM.

CHAPTER XXI
IN WILDER SPAIN

I.—WINTER.

SINCE the War, my sojourns in Spain have been spent in a romantic *Château en Espagne*, the ancient Castle of Arcos, a spot of hoary historic memories. Two thousand years ago, Arcos was a Roman fortress; but a whole millennium before that, it had formed an outpost of Tyrian and Phœnician merchant-adventurers who had established themselves at Tarshish (Tartessus) and Gadeira (Cadiz), 1100 years before Christ—see Ezekiel, chap. xxvii. They were ejected by the conquering Carthaginians, the latter in turn to be overthrown by Rome. On the decline of Roman dominion, Arcos, and all Andalusia, was overrun by successive hordes of Goths, Visigoths, Vandals, Huns—*nescio quos*—till eventually, in A.D. 711, these semi-barbarians were defeated and expelled by the Moors—"turbaned Caliphs from Damascus." Under the more civilising influence of the Crescent, Southern Spain remained for near eight centuries, till Ferdinand and Isabella (A.D. 1492) finally expelled the Arab intruder from Europe. During these stormy ages, "Arcos of the Frontier" must have been about as unhealthy a dwelling-place as were our own Northumbrian Borders—those "Middle-Marches" that lay towards Scotland—in the moss-trooping era of Border raids and reivers. Should any doubt, let them read Sir Herbert Maxwell's *Story of the Tweed*. Recently that Castle of Arcos has passed into peaceful English possession and now forms for me a second home in Wilder Spain—some eighty miles north of Gibraltar and twenty-five from the nearest railway.

By sheer strength of physical situation Arcos, in olden

days, formed an impregnable fortress.¹ Perched on the ridge of an isolated peninsula of rock, sheer on one side and "perpendicular" (?) on the other, its only connection with the adjoining highlands was by a narrow knife-edged neck—the whole encircled by the historic Guadalete which surrounds the base of the promontory. That river, it will be remembered, was the scene of the catastrophic defeat of Roderic, last of the Gothic Kings, who in 711 lost both his kingdom, his army, and his life upon its banks. In direct consequence of that event, Spain for 780 years passed under Moslem domination. Naturally, in so long a period Moorish customs and conventions sank deeply—insomuch that, till within living memory, the women-folk of Arcos and Medina Sidonia, with the neighbouring villages of Vejer and Tarifa, continued to go out veiled. A cynic suggests that the custom might be revived—an ambiguous sentiment that can equally be interpreted either as grossly libellous to the sex, or alternatively a graceful tribute to their charms. Anyway, perish the thought!

The Castle itself occupies the apex of the ridge, its ramparts rising from the very verge of crags 312 feet in vertical height. To me, as a naturalist, these crags possessed a glamour that even surpassed the mysteries of archæology, inasmuch as—should I blush confessing?—they formed the ancestral home of a horde of huge griffon vultures, whose eyries I have shared day and night during sundry springs and winters—an experience that few ornithologists can have enjoyed.

The level strath of Guadalete below our windows is very narrow, shut in a short mile away by forest-clad foothills that

¹ Tradition avers that the Castle once withstood a Moorish assault though garrisoned only by women. The Moslems had made a feint attack on the mountain-village of Zara a few miles distant, with the express design of luring away the garrison of Arcos. The Duke of Arcos fell into the trap and, during his absence, a second Moorish force attacked his Castle. The Duchess, however, paraded her women-folk, disguised in armour, on the battlements, thus maintaining a brave resistance during three days; meanwhile the Duke of Medina Sidonia, though a hereditary enemy of His Grace of Arcos, forgot the family feud and hastened to the relief of the beleaguered Duchess.

stretch to the Serranía de Ronda where, within full view, the grim grey *massif* of San Cristobal (5800 feet) towers head and shoulders above all rivals. Till within a few decades this majestic pile afforded a home to the Spanish ibex, and still



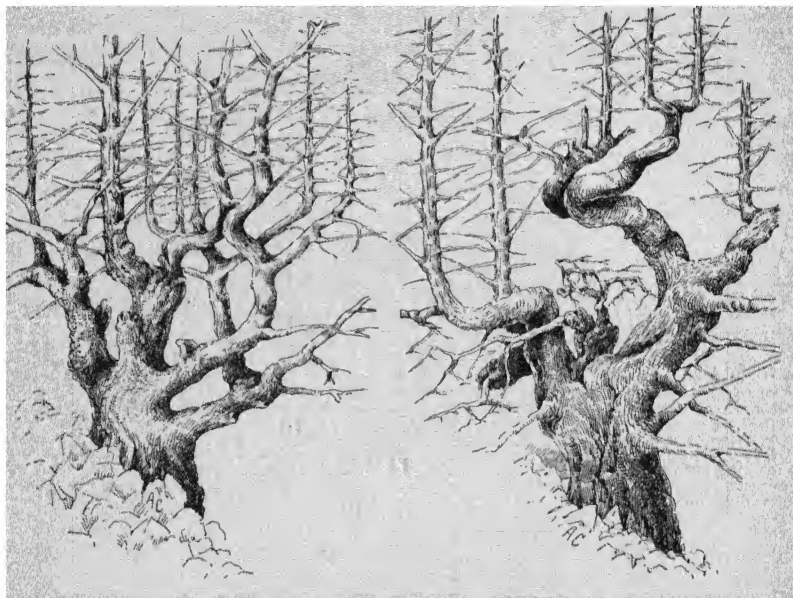
LAMMERGEIER. San Cristobal, March 1910.

shelters the lammergeier and other weird survivors of a bygone age.

San Cristobal shares with two or three neighbouring mountains the distinction of being the only known spots in the world where the Pinsapo (*Abies pinsapo*) grows. These pines of multiple trunks flourish only on the northern faces

and appear to prefer a site of broken boulders bleached white as marble—their roots doubtless reaching to more fertile soil below. Other characteristic plants of San Cristobal are rhododendrons and tree-fern (*Osmunda*); but these are common to other South-Spanish sierras.

Recently Admiral Lynes has reported Pinsapos from the



PINSAPO-PINES (*Abies pinsapo*).

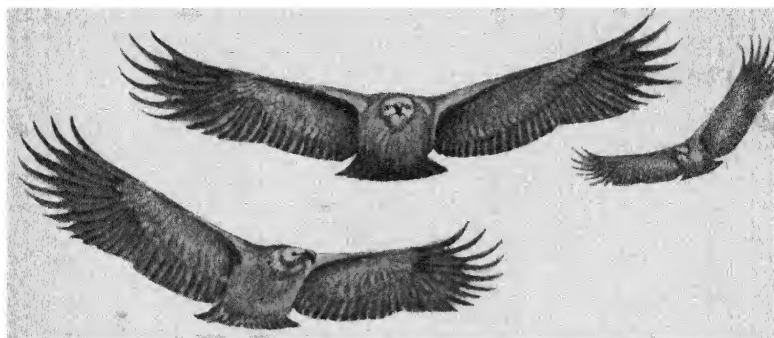
From six to ten huge lower limbs—according to where the count begins. Sometimes ten or a dozen vertical trunks above. (Drawn from individual trees.)

Atlas Mountains in Morocco; though these differ slightly from the Spanish type. Of the latter, I have several fine specimens growing in Northumberland, some reaching 30 or 40 feet.

Our home-vultures at Arcos seem uncommonly work-shy: for rarely do they turn out before 10 or 11 o'clock in the morning, while before 4 P.M. the heavens are flecked with their returning forms. *Gyps*, however, can plead extenuating circumstances; for even in Sunny Spain these winter mornings reveal a matutinal film of mist overspreading the lower lands,

and the haze is impenetrable even to the vision of a vulture. 'Twere labour lost to start hunting ere the sun shall have dissipated these morning mists. Indeed on wet or fog-bound days never a vulture quits the eyry at all. The whole crowd sit huddled up on their ledges and *apparently* disconsolate; though that is not their true frame of mind, since vulturine commissariat is always intermittent and a few odd days—or even weeks—without rations in no way incommodes their economy.

On bright and sunny mornings, in the reverse, all is hustle, activity, movement. Then these giant creatures afford imposing

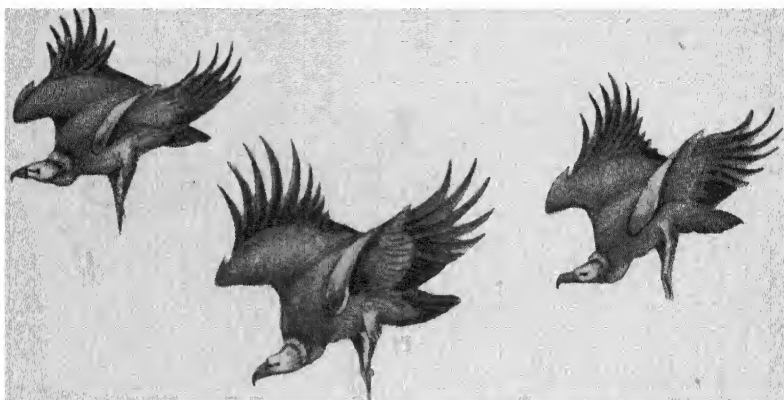


VULTURES FROM OUR BALCONY AT ARCOS.¹

spectacles in bird-life—striking indeed to witness while seated at ease in our hanging balcony, pencil and sketch-book in hand. In infinite convolutions, opposing, concentric and elliptic, the great griffons pass and repass, often within rod's length; and by February, amidst the ponderous throng, fairy-like forms thread a sinuous way. These are Lesser Kestrels—tiny hawks so elegant and so chastely hued that the sunlight seems to shine through their gossamer figures.

¹ There exists around these giant birds a sort of "atmosphere"—a sinister and semi-terrorising character quite beyond my pencil to portray. Though all these sketches are direct from the life, yet none satisfy—even the first rough pencil-drawings realise the ideal better than I can elaborate it. These Flying Dragons *ought* to make one's blood creep! But that terrific end cannot be attained—not, at any rate, by me. See also *Savage Sudan*, p. 368—another effort to reduce vivid sensations to cold print.

These morning manœuvres may continue half-an-hour or more, the vultures ever rising higher at each repeated circuit of space. Then, it may befall, all return incontinently to the eyries they had quitted just before—why? But on other mornings, on the initiative of certain leaders, the whole company will strike out a bee-line in one direction or another and within brief seconds all are lost to sight. So far as human judgment can interpret the signs in wild-life, we suggest that the higher patrols, ere “taking a departure,” had already received a definite tele-visual



VULTURES PARACHUTING.

Resemble something between an enraged octopus and an explosion.

indication based on the movements of other far-distant vultures, disclosing the discovery of some carnal treasure. Failing such index, and with rival patrols searching every horizon, our own vultures may decide that, for them, an independent hunt that day would be labour lost—so back they all come.

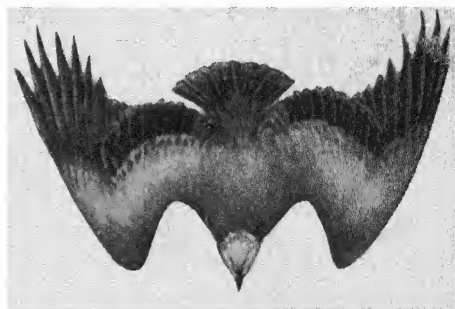
The return of the vultures in the afternoon affords another striking spectacle. Between 3 and 5 P.M. (the hour depending upon “visibility”) the skies above our home-crag become punctuated with soaring forms aloft, and their varied methods of descent are delightful to watch. Some continue wheeling around on set pinions but in ever-descending circles till the desired declension is reached. Others, more impatient, permit

the despised Laws of Gravity to resume their wonted sway—but only during brief moments, what time the ponderous bulk drops vertically earthwards; but visibly under complete “engine-control”—the great wings just sufficiently tilted upwards and backwards. Thus, one may perceive what at first appears a mere speck in cerulean altitude—momentarily its size increases till one realises that this speck is also a vulture, falling through space like a feathered parachute and at amazing speed:—

“ . . . *ratione ruentis acervi,
Mobilitate viget, viresque acquirit eundo.*”

Often, amidst the soaring throng, a single vulture—perhaps two or three—suddenly shifts course, heads up into the wind, then dropping great bushy legs, and with extended neck and reflexed pinions (acting as “brakes” and regulators alike), “nose-dive” diagonally earthwards. The angle of descent may be 30 to 40 degrees from the perpendicular, and such its velocity that one hears afar the rush of wind through rigid uptilted primaries. The dive may be prolonged over 1000 feet or more; then those huge wind-sails extend once more, a horizontal attitude is regained and, with a “hurricane header,” the vulture vanishes within its eyry.

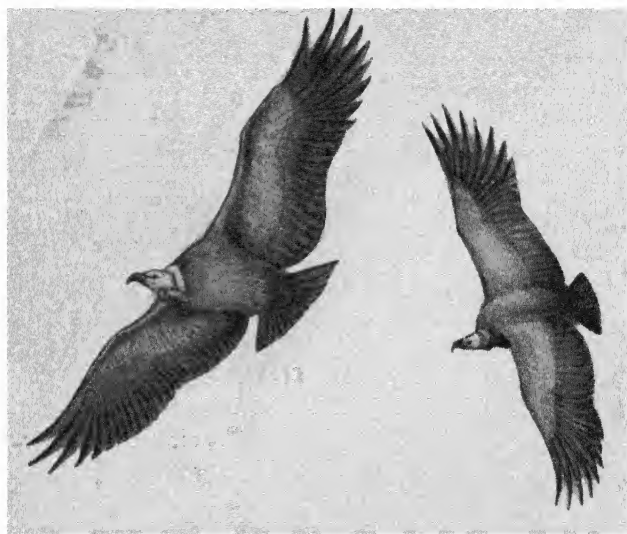
Another and most graceful mode of descent is by an interrupted spiral—dropping in a series of exact mathematical half-circles, the wing-action at each reversing point being masterly beyond words, balancing sidelong on air as course is shifted, lissom as elfin dancers. The manœuvre is analogous with that of “tacking” aboard the sailing-ship of old. While in full career, a touch on the helm and she flies up into the wind . . . for a second, all sails are a-quiver; but yards are



A “HURRICANE HEADER.”
(As seen from directly above.)

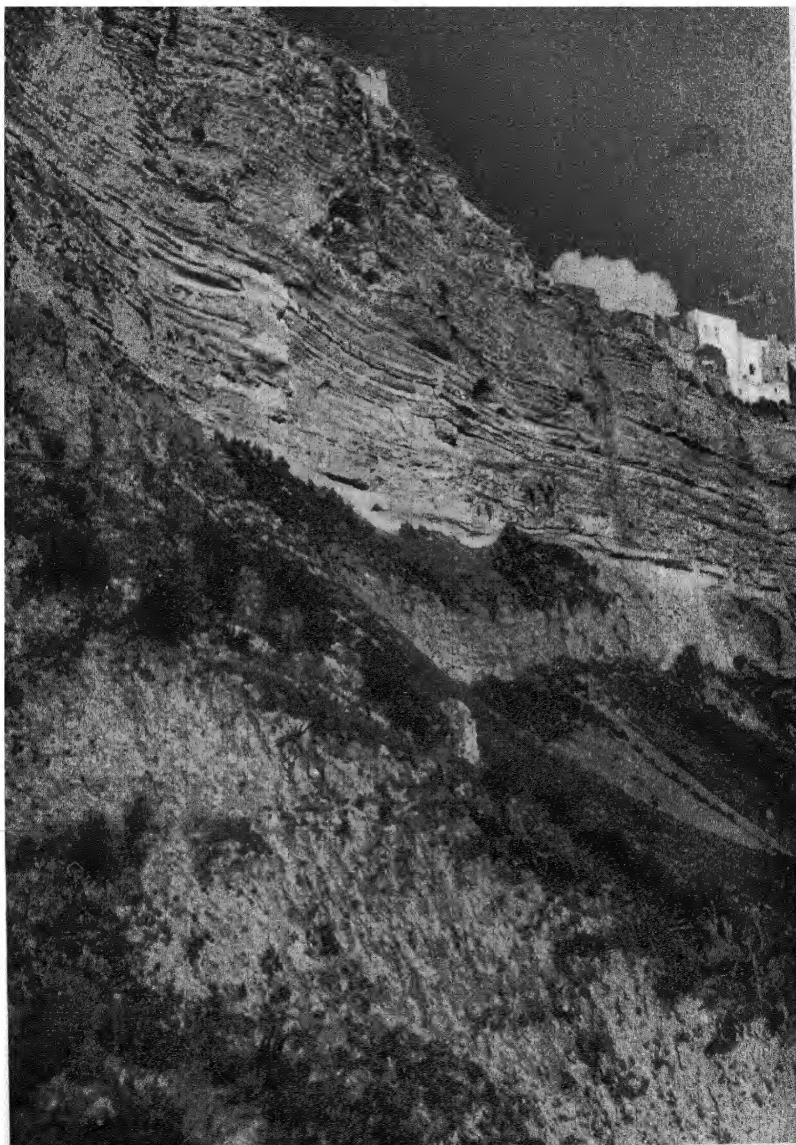
smartly braced round, and instantly the whole spread of canvas fills from the opposite quarter—a striking spectacle to those accustomed to seeing it. To how few, alas, can the simile appeal to-day! Thus, twice daily, we have “staged” for our sole enjoyment and benefit these unique and majestic exhibitions of aerial bird-life.

The conquest of the upper air has become a factor of supreme importance in human sense ; hence these few remarks



on its mastery by the feathered world need no apology. The few instances specified are but examples of many that daily fall within our observation at Arcos. Without any technical knowledge of aeronautics, the spectacles are of the sort that no Nature-lover could ever tire of watching.

The subsequent redistribution of the incomers, moreover, is packed with amusing incident. First-arrivals all make for the caverns—call these the “Reserved Seats” (at half-a-guinea). But soon all that available space is occupied and later arrivals must content themselves with a perch on some projecting buttress, or on the long open ledges that stratified limestone always affords—call these the fauteuils or pit-stalls! But even



THE CASTLE CRAG AT ARCOS.

A Line of Vultures is visible along Ledge below the Main Cave.

(*Riddell: Photo.*)

[To face p. 288.

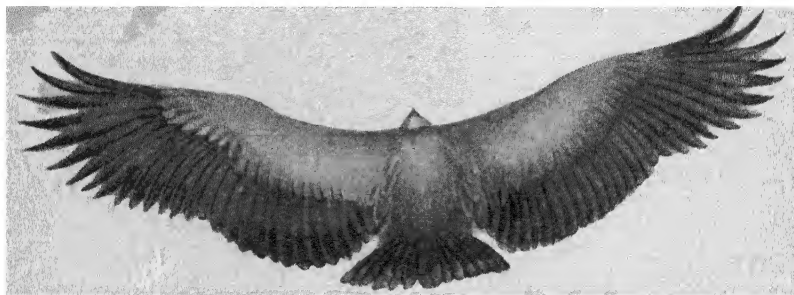
here congestion soon sets in and, one after another, belated units fail to find foothold anywhere. These, perforce, must sheer off, constrained to wing a disconsolate flight elsewhere. A headstrong individual may endeavour, with mighty wing-flaps, scuffling and snapping, to wedge himself into the assembled ranks; but this the *Beati possidentes* resent with tooth and claw and the intruder is ejected. Nor is it his vulturine



confères alone that such violence molests; since caves and crags alike are also tenanted by hordes of blue rock-pigeons which by scores are driven out by the disturbance and forced to seek lodgings elsewhere ere darkness closes down the scene.

An underlying problem in this connection has puzzled every naturalist who has visited Southern Spain:—How and where do the hordes of vultures which swarm in this southernmost apex of Europe find their daily bread? Remember that a single patrol—say a score—is capable of demolishing a big

beast (such as horse or ox) within an hour or two; yet not even in wildest Spain do such carcasses lie broadcast. The solution can only lie in powers of far-extended flight and of speed that exceed our present conceptions—a subject already treated in this book (*cf.* Chap. XIV., *supra*). It is these powers alone which enable the vultures day by day to survey in detail vast areas of semi-savage regions—such, for example, as the *despoblados* and desolate *dehesas* of Estremadura and La Mancha, lands in “God’s own holding,” all unchanged since Don Quixote rode forth in quest of Dulcineas and damsels in distress. For throughout the length and breadth of Spain, one sees every-



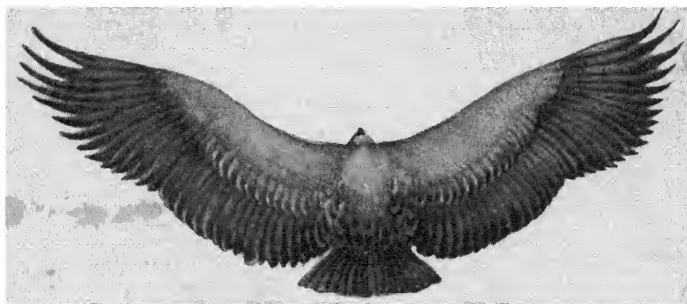
(i) VULTURE LEAVING EYRY. (Sketched from directly above.)

where the wandering vulture—though hundreds of miles from their mountain-homes. One sees them in the remote marismas of the sea-board, on these limitless stretches of dreary wildernesses and stone-clad pasturages of Castile or Arragon, Guipúzcoa or León . . . in short, “wheresoever the carcass is, there will the eagles be gathered together.”

Another potent, though minor factor (more or less generally recognised), is that of an intermittent commissariat. The vulture does not demand “four square meals a day,” as we are told—probably libellously?—is the habit of Lord Mayors and Aldermen. On the contrary, a plethoric gorge one day may be succeeded by a fast prolonged over many days, if not weeks. Our home-crag at Arcos are invariably occupied all day long by laggards—presumably the fortunates that enjoyed a surfeit

yesterday, or yester-week? These lingerers lie fast asleep, many prone on the sun-baked ledges, others with wings expanded to catch every solar ray.

Watching year after year these majestic aerial evolutions—at times apparently so aimless and indeterminate—one may try to fathom their purpose, to assign some specific motive for each cryptic variation. Perhaps the nearest interpretations are those suggested above. Were it conceivable that our vultures at Arcos for once deigned to become communicative, they could surely reveal in half-an-hour more of their recondite minds and motives than we can learn—or guess—in years



(ii) VULTURE LEAVING EYRY—MOTTLED TYPE.

of observation? A few sheets of foolscap in vulturine typescript would convey a more valuable insight than whole volumes of the stereotyped speculation that too often masquerades as “natural history.”

We have other weird co-tenants, feathered, furred, and scaled, who share our crags at Arcos. Ravens in particular, falcons and owls—the great eagle-owl serenades us after nightfall, and one pair of white owls (with hordes of bats) had to be ejected from what is now my bedroom. It should, in fact, have been mentioned that at first this old Castle was virtually a ruin, with jungles of nettles, briars, brambles, prickly cacti, and other hostile plants (including wild cucumbers which explode at a touch) growing rampant in corridors and stairways; with regiments of bats hanging by their hind-legs from

roofless rafters where now by the energy and tasteful adaptation of the present owner, we live in conditions of quite comparative civilisation—not to say luxury!

In winter our feathered neighbours are less varied; but



LITTLE OWLS (*Athene noctua*).

A summer evening in our garden at Jerez.

we always have the company of the blue thrush (*Monticola cyanus*; in Spanish, Solitario), and on cold evenings, crag-martins (*Cotile rupestris*) roost in the porches and on window-sills piled up in little heaps that look like cushions. Then there are the spotless starlings (*Sturnus unicolor*) a small colony of which usually winters with us. Properly speaking, this is a spring-migrant which, by rule, ought not to reach Spain

before March—what time the British species (which swarms here all winter) departs for the North. It then announces its arrival with a pretty trill, not unlike the opening bars of a nightingale, but breaking off suddenly in the midst of the note. A similar anachronous colony occupied the carob-trees outside our old shooting-lodge in Doñana, and used to awaken us each winter's dawn with musical whistles, besides croaking like frogs and imitating to perfection the notes of curlew and stone-plover, peewits, wigeon, and other wildfowl.

This is hardly the place to catalogue all our multitudinous neighbours, charming and other. There would need to be specified snakes of sundry sorts and sizes up to 6 feet long—none known to be venomous except the common adder. We have also scorpions, tarantulas, and millepedes that sting: myriapods, wolf-spiders, geckos, and lizards that do not, though some of the latter reach a yard in length. The larger reptiles, however, are not in much evidence during winter: though a regiment of rhinoceros beetles may cause a flutter in the dovecots.

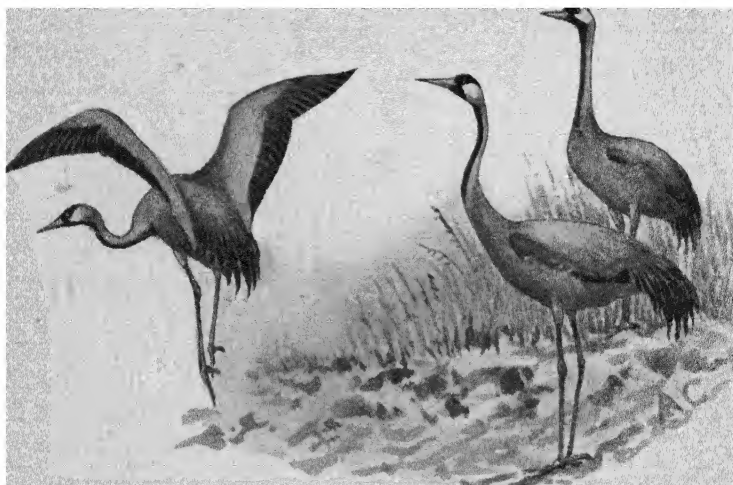
Certain spiritual neighbours must not be entirely omitted, though at some risk of sacrificing a hard-won reputation for veracity—for there are Ghosts which also haunt our Castle. It may be that they are the Lost Souls of archaic Roman centurions or sergeant-majors condemned to this penance for using in life unduly explosive language? The Author has no use for the supernatural; yet when these shadows flicker and flit across our walls, they certainly represent no substance that can be captured in a butterfly-net!

“Neither substance quite nor shadow,
Haunting lonely moor or meadow,
Dancing by the haunted spring,
Riding on the whirlwind's wing.”

SIR WALTER SCOTT.

Immediately below our “hanging balcony,” a narrow rock-shelf in the crag, overgrown with cactus and aloe, affords favourite hunting-ground to many of the warbler-tribe, conspicuous among these being the blackstart (*Ruticilla titys*)

and Sardinian warblers. The cacti also swarmed with what I took to be willow-wrens till we picked up a dead one, and closer examination proved that they were all chiffchaffs. In winter, when all are silent, the two species are not easy to distinguish; but we have since learned that Europe is not big enough for the willow-wren at that season. There are also a few Dartford warblers, and by February blackcaps, white-throats, garden-warblers, and the rest begin to appear.



CRANE ALIGHTING. Arcos, February 1927.

Midwinter in hill-regions, whether in Spain or elsewhere, can rarely claim any abounding variety in bird-life. In those lovely forests of cork-oak, ilex, and wild-olive that surround our Andalusian home, one spends long days without encountering anything of special note—perchance a soaring kite aloft, a spotted woodpecker, jay, or tree-creeper, a few hawfinches or a pair of southern grey shrikes. On some splashing mountain-burn a couple of grey wagtails (*Motacilla melanope*) may charm a critical eye; or, by yet rarer chance, a solitary dipper. The surroundings, however, enchant and that makes amends—the beauty of massed undergrowths, cistus and rosemary, lentisk,

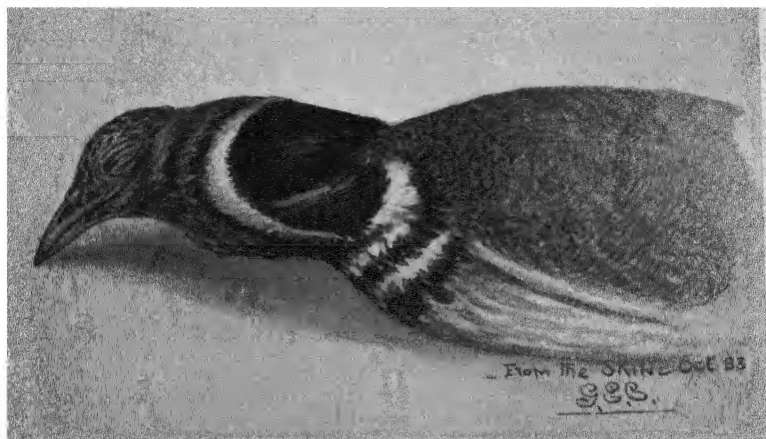
genista and myrtle, arbutus and laurestinus, brooms, gorse and heaths, each of a dozen kinds and many in full bloom—the whole glorified in a wealth of intercepted sunlight. In Spain, our homely robins, wrens, and hedge-sparrows prefer these wild woods and shun the propinquity of man. Here and there one sees sporadic parties of busy titmice (great and blue, with long-tailed tits in February), or a missel-thrush; goldfinches abound, but that almost completes the census.

Where charcoal-burners have denuded the forest and patches of tillage intrude, are found mixed packs of the thrush-tribe, including redwings; also bramblings, serins, a chance cirl- or rock-bunting (*Emberiza cia*), with ortolans as spring advances:¹ or where a broader plateau opens out sufficiently to lend itself to corn-growing on the larger scale, we have not only the abounding lark-tribe (buntings, calandras, pipits), but last not least, bands of the great bustard, solemn storks all solitary, and tall grey cranes in hundreds that stride over the spring-corn like regiments of Dragoons.

That Guadalete is a river of torrential moods is attested by all the three bridges intended to link up Arcos with the outer world, having been swept bodily away, despite their massive construction by archaic builders—Roman or Moor? To-day access is achieved by ferry-boat—so the stream be in gentler mood. In its upper course, winding down a sub-

¹ It bears on migration to note that, in mid-February, a bunch of thrushes (*Zorzales*), bought for eating, would comprise half song-thrushes, half redwings; but by the end of the month the redwings had disappeared, while thrushes and skylarks linger quite a month later. One sometimes reads fierce abuse of southern nations for eating these "song-birds" at all. Such diatribes are equally stupid and unjust; for, in Spain, neither thrush nor lark are song-birds. They are purely winter-migrants, and at that season are silent. Ordinary Spanish folk can know nothing of their being "song-birds" in other climes and at other seasons, but regard them as a Heaven-sent food-supply each winter. In Spain there are neither sirloins of beef nor haunches of mutton. Remember also that the supply never diminishes, despite the millions devoured. Nature provides for its renewal. Even "song-birds" do not sing continuously like a wound-up gramophone!

alpine vale, oft deflected by rock-scaur and other geologic obstruction, Guadalete approaches the similitude of a salmon-stream, its shelving shores fringed with shingle and flanked by open woods of white elm and olive, with thickets of tamarisk and oleander, whence one may flush the occasional woodcock or partridge, besides weird creatures such as mongoose and genet; but for the noble salmon one would look in vain.



LESSER BUSTARD (*Otis tetrax*). Shot on Guadalete, May 19, 1883.

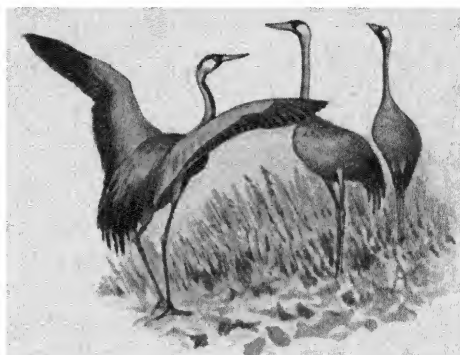
Showing extreme dilation of throat at that season. (*Cf. Saunders' Manual*, 2nd ed., p. 526.) Drawn by Geo. E. Crawhall.

The laws of geographic distribution—to say nothing of opaque waters abhorrent to his tribe—forbid. Yet, though absent in person, *Salmo salar* has here an *alter ego* of no mean pretension—another sea-rover that in winter seeks the sweet waters. This is the shad, in Spanish *Sabalo*, a shapely game-fish that runs up to 4 or 5 lb., white in flesh and excellent on the table. Like the salmon, the shad never feeds in fresh waters; hence is amenable to no known lure and has no value from the angler's point-of-view.

A ford of Guadalete a few miles below Arcos, known as the

Barca Florida, perpetuates a historic legend that might, after so many centuries, have been allowed to lapse into oblivion. It was here that the decisive victory of the Moors over Roderic, last Gothic king, delivered Spain into the Moslem dominion. Spanish tradition holds that the Lady Florida, daughter of the Gothic Commander, having been insulted by King Roderic, her father, in revenge, betrayed his plan of campaign to the Arabs with that fatal result. The name Florida has since been barred as a feminine appellation.

It was at the Barca Florida that a tragic accident, at which



CRANE "SUNNING." Arcos, December 31, 1926.

we were present, occurred in May 1883—as related in *Wild Spain* (p. 211). Two men, with several of their mule-team, were drowned in attempting the passage of the swollen river; and being ourselves delayed, the gruesome result ensued that the first person we met on returning towards Guadalete was our faithful old Blas, all solemn and dejected as he endeavoured, by watching the flight of vultures, to discover our remains.

En Febrero busca la sombra el perro runs a Spanish proverb, which not inaptly epitomises the changing season. Hardly has February begun than, as warmth increases, so proportionately life in the lower creation expands day by day; bats flicker in the afternoon sky and butterflies multiply. Some few of these, it is true, had been on wing all winter (painted ladies, clouded yellows, brimstones, Bath-whites, etc.), but in February new

species appear daily and the very grass rustles with incipient insect-life. Alert lizards dart from rock-crannies, and snakes a yard long glide from among the brushwood. At dusk on 10th February the mole-cricket started his alarum-like trill for the season; soon the "lilies of the field" (narcissus and asphodel) will be in full bloom—the purple iris has been so all winter—and by the end of the month the whole land is flower-bespangled. Then commences the deluge—that torrential inrush of immigrants from Africa that changes the face of Nature; but with that we are not concerned—the title of this chapter forbids.

[THE WINTER of 1926-7 was exceptionally severe, temperatures falling as low as 30°, 27°, and even 14° Fahr., throughout Spain. Even along the Mediterranean coast a few degrees of frost were registered, causing grave damage to the orange-crop. In mountain-regions, the readings were far lower, in some cases down to zero; and at La Granja, in the Guadarrama, 10° below zero. The newspapers were full of accounts of wild beasts driven by hunger from their normal haunts and invading the regions below. Thus, from the snow-enveloped Pyrenees, *El Sol* reported a "descent of bears in droves [*osos en manadas*] which, rendered desperate by hunger, were ravaging the cattle of the villagers below." From hill-regions as far apart as Guipúzcoa, León, and Zamora, came appeals for public assistance in repelling the hordes of wolves and wild-boars which were destroying both cattle and crops.

Here are two typical incidents:—"Zamora—near the village of Tábara, Eugenio Vabera found himself encountered by a wild-boar, against which he opened fire. On finding itself wounded, the savage beast set upon its assailant, throwing him to the ground and ripping open his thigh. Fortunately his dogs came to the rescue and saved him from being torn in pieces." . . . "Near Oñate, a woodman named Augustin Cornejo was suddenly attacked by a wild-boar which struck him from behind. He managed to defend himself with a hatchet till some neighbouring workmen had time to rush to his aid. Among them, they despatched the *fiera* with axes."—(Translated substantially from *El Sol*, Madrid.)

At Arcos, on several days, we had ice an inch thick in our Patio, and twice the air was full of drifting snowflakes—neither of which things can I recollect occurring before.]

CHAPTER XXII
IN WILDER SPAIN

II.—SPRING.

BIRD-LIFE in *Wilder Spain*, even in mid-winter, is varied enough to catch the less observant eye. But the first faint sign of spring adds an entirely new element, for it inaugurates an inrush of semi-tropical types that well-nigh bewilders in its wealth of gorgeous hues.

From the end of March, the country-side everywhere gleams with passing bands of bee-eaters, radiant in chestnut, emerald, and gold, that poise and pose overhead in studied attitudes, formal as dancers in a minuet—their burnished plumes flashing like jewels in the sunshine. Quite as striking, though less in evidence, are the golden orioles, the blue jays or rollers, the ubiquitous



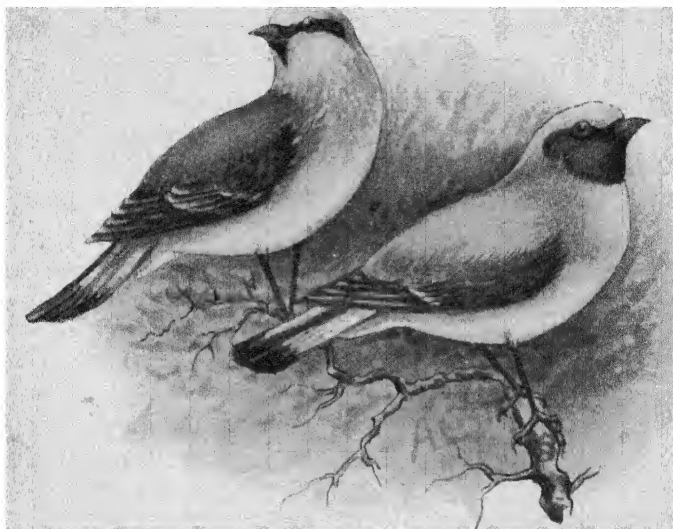
hoopoe, the woodchat, rufous warbler, and others too numerous to capitulate in a sentence. Most of these may be seen without seeking—almost they obtrude on the casual wayfarer; hardly a wooded dell, a grove of ilex or wild olive, or the flower-bespangled *vega*, but will reveal one or all of them.

Of quite different type is the vernal immigration of birds-of-

prey, these also coming across from Africa, though with quite different objectives. For, even in Sunny Spain, the snakes, lizards, and other big reptiles are constrained to hibernate, and simultaneously the reptile-feeders must depart to warmer climes. But, as early as March, or even in February—what time the colubers and great Eyed lizards (some a yard long)—emerge from their hibernacula, at once one hears among the groves of scattered stone-pines, or in the recesses of the cork-forests, the wailing cry of the booted eagle or the plaintive *p'you, p'you* of the black kites; while, outside the woodlands, the endless wastes of palmetto and lentisk-scrub are once more adorned by the soaring figures of serpent-eagle and Montagu's harrier—the latter the most graceful of his raptorial order, light-built and light in colour; but to small fry a phantom that spells sudden death. The handsome neophron vulture also reappears, though why it should ever have quitted Spain at all (since its food is confined to carrion) is not so obvious.

Most of the above can be seen unsought, but Nature is ever chary of her treasures—little apt to place all her creations in the window. Other species, though no less numerous, are more reclusive, and need to be searched for in their particular haunts. Thus, out on the more arid plains and barren *dehesas*, one encounters two lovely types of desert-wheatears, newly arrived, and which are not only exquisite in themselves—arrayed in cream and ebony—but of specific interest, because a problem in ornithology centres around them. The two are distinguishable at a glance; for one, the black-eared wheatear (*Saxicola aurita*), has merely a broad black band running backwards through the eye to the ears, whereas in its congener (*S. stapanina*) the darker colour covers the entire throat, as shown in sketch at p. 103. These two birds, it has been suggested, are but one, that is a "dimorphism." Such may be the case; but locally, in Southern Spain, my own observations point to a different conclusion. For, of seven nests discovered—(all built in crevices of the rugged ground)—the owners were in each case of equal type, five pairs belonging to the black-eared, two to the black-

throated form. These wheatears, moreover, are extremely conspicuous, not only by reason of their contrasted colour-scheme, but also owing to their incessant activity. On the open desert, covertless at this season save for the skeletons of giant thistles, each pair catches one's eye at 100 yards or more—they actually challenge attention; and of some scores thus scrutinised this spring, each pair belonged definitely to one or



BLACK-THROATED WHEATEAR (*Saxicola staphazina*).

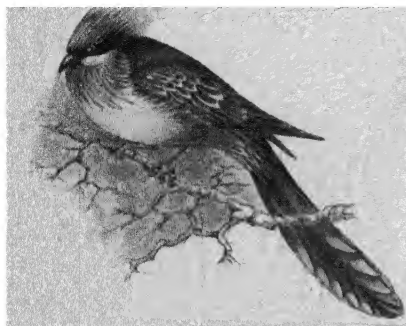
Note distinctive black patch on chin of female. See also another sketch at p. 103.

the other form. Had interbreeding been in operation, it could not, under such circumstances, have escaped observation.¹

The eggs of the two are certainly indistinguishable *inter se*. Curiously, one of these nests (of the black-eared wheatear)

¹ Identification is undoubtedly complicated by the fact that, on first arrival in Spain, many young males of *S. staphazina* (though black-throated) still retain the russet dress of the female. Adults of the latter sex all show a black patch on the chin—usually a tiny triangle below the beak, as shown in sketch above. This feature is lacking in *S. aurita* which is entirely white below. Canon Tristram wrote:—"The two differ from the youngest to the oldest stage. I have taken many nests and never knew them to cross."

contained an egg of the cuckoo—mottled grey, like that of a wagtail, and in striking contrast with the pale blue eggs of the dupe. This was only the second cuckoo's egg that I have found in Spain, the first being in a nest of stonechat on 23rd April 1872—alas! fifty-two years earlier. This was, at the time, the first instance recorded of our British cuckoo breeding in Spain. That it does do so, however, is now quite assured, and this spring (1924) I both saw and heard several right up to the end of May. Much more typical of Andalucia, nevertheless,



GREAT SPOTTED CUCKOO.

is the great spotted cuckoo (*Coccystes glandarius*) whose far harsher, triple note—in two distinct cadences—is characteristic of the ilex and cork-forests of our neighbourhood at Arcos. Years ago, in the Coto Doñana, I used to be very familiar with this dashing parasite. There its invariable victim was the magpie, one of the most abundant residents and whose

eggs the cuckoo had learnt to imitate to a nicety! But here, near Arcos, never a magpie will you see. What foster-parent fills the gap? That question I have failed to solve.

The magpie, by the way, affords a curious instance of the vagaries of geographic distribution. Westward of Guadalquivir (as just indicated), it swarms to a scandal; yet *east* of that great river it is absolutely non-existent. A similar local limitation of range (but only as regards their breeding) applies equally to the peewit and redshank.

Apropos of the cuckoo, a reference may be permissible in a general record although refused admission to a monumental work such as *Savage Sudan*! In the woods beyond Fashi Shoya on White Nile, on 22nd February 1913, I clearly heard the note of our British cuckoo, and on nearer approach saw the bird fly from a tree, but too far for the "collecting-gun." That,

however, may be another way of saying that a hasty snap-shot missed its mark! Note that there are no imitative urchins within some thousands of miles of that spot.¹

Though, in Spain, I regard these two desert-wheatears as specifically distinct, yet the problem they have suggested gives one to reflect on the intrinsic value of those terms "genus" and "species." Both definitions are, of course, essential to us in our interpretation of Nature. Still they are, after all, only human devices which have never, I conceive, been *officially* recognised by Nature

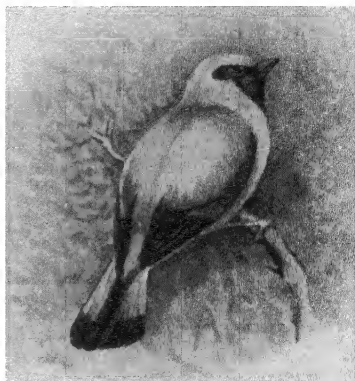
herself? Other local instances occur. We

have here two species of kestrel, perfectly distinct, alike in size, in plumage, habits, and seasonal distribution; yet between the two, there occur casual individuals possessing the attributes of both and which cannot definitely be assigned to either form. Such cases may,

prima facie, be ascribed to interbreeding; but hybridism (though it occurs) is no set part of Nature's scheme, and personally I prefer to regard these puzzling intermediates as indices of some physiological principle that as yet remains unrecognised:

"There is a door to which we find no key;
There is a veil past which we cannot see."

OMAR KHAYYAM (adapted).



¹ Fashi Shoya has its own little niche in history, being the spot whence the last British Expedition set forth during the long Sudan wars. That expedition, under Sir Reginald Wingate, achieved a striking and brilliant success—the final destruction of the Khalifa and of all his surviving Emirs. This was in November 1899.

Again, in the insect-world, we have locally two forms of the brimstone butterfly—one the plain whole-coloured *Gonepteryx rhamni* of our British schedule; and the southern



SPANISH IMPERIAL EAGLE (*Aquila adalberti*), adult.

Coto Doñana, May 6, 1883.

G. Cleopatra, gorgeous in orange-red on fore-wings. Yet it is not unusual to see the two toying together. A somewhat similar case I described in detail in the *Field* of 27th August 1921, the subjects being the common and the crested coot—two quite distinct species interbreeding. Many analogous instances occur to mind.

How many butterflies one sees in Southern Spain which are, in a sense, precise replicas of our British types—alike in every main character, yet differing in trivial detail. On the other



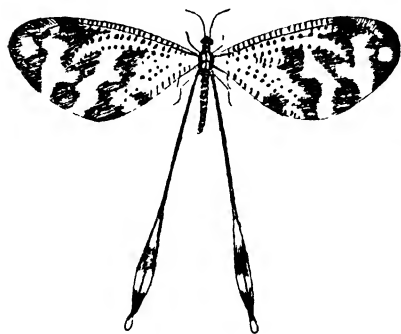
SPANISH IMPERIAL EAGLE. (Intermediate phase, third or fourth year; an earlier stage is sketched at p. 319.)—El Alamillo, Guadalete, June 1891.

hand, several species in Spain appear precisely identical with their British co-types—such, for example, as the red admiral, painted lady, clouded yellow, swallow-tail, Bath-white, etc.

After examining the few butterflies I had brought home, George Bolam waxed poetic, writing:—"Your Spanish butterflies! Some of them really splendid objects, so delicate in

markings, so like and yet so different from many of our own. Almost it would seem as though Nature had worked each favourite pattern for all it was worth—putting in just a touch, very deftly, to vary one race, or ‘subspecies’ from another; sometimes in millimetres, sometimes in chromatics—wonderful and beautiful beyond words.”

Butterfly collecting in tropical climes is a fairly tough proposition. Selous, I recall, developed a terrific energy in this pursuit, “carrying-on” even in the paralysing heat of the African noontide when every other living creature lay



prone, suffering in passive quiescence. Even in Spain, it is no light undertaking at mid-day to chase creatures that fly like birds and often over the roughest of ground. An extraneous difficulty is added by the number of flying things that are *not* “game”—in entomological sense—and which only serve to exhaust physical powers.

One in particular deserves note, because it abounds in Spain—a curious gauzy-winged insect, some four inches in expanse and with long pendants streaming behind. When first we met with it (and sketched it in *Unexplored Spain*) we were assured—wrongly as the event proved—that it was a final flying stage evolved by the Ant-lion (*Myrmeleon*), and at that time even the veteran naturalist Editor of the *Field* was at a loss precisely to identify it. Later, in 1917, similar specimens were sent home from Salonica, when it was ascertained that they belonged to the *Neuroptera*, allied to the lace-wing flies (*Chrysopidæ*), their scientific name (they have none in English) being *Nemoptera sinuata*—see Mr Harting’s letter in *Field*, 22nd September 1917.

My chief prize during that spring was the big and beautiful hawk-moth, *Smerinthus querchæ*—(its colour-scheme an exquisite symphony in delicate greys, buffs, and palest browns, with

transverse lines and darker shadings)—which, it appears, had not previously been captured nearer than South-Eastern Europe and Asia Minor, and rare at that.

It may, however, reasonably be presumed that in big wild countries such as Spain, where great tracts are rarely visited by naturalists, many reclusive creatures may yet exist unknown. Thus, the previous year, among a number of specimens that I had sent to the British Museum, was a big bat, respecting which Mr Oldfield Thomas wrote me: "The pick of your collection is the big bat. It is the Giant Noctule (*Nyctalus maximus*) which has never before been recorded from the Spanish Peninsula. We have only two or three specimens of it altogether in the Museum, so are very pleased to have it." This big bat, I also read, has "only been recorded from a few localities in Switzerland and Italy." Still, this was the second we had obtained in Spain. The first was shot in the remote pine-forests on the coast of the Coto Doñana; but that specimen was lost owing to the War. The second was picked up dead in our garden at Jerez beneath a telephone wire and presumably killed thereby.

Again, I had previously sent to the British Museum a number of specimens of a tiny brown water-shrew, both old and new-born young. Now although this mite of a creature abounds in the marismas of Guadalquivir, living amongst water-rooted samphire-bush, yet it transpired that never before had its presence in Spain been suspected. Its name is the dwarf water-shrew, *Pachyura etrusca*, and it is the smallest known quadruped, measuring only $2\frac{1}{2}$ inches in length, including near an inch of tail—sketched at p. 235. Previous to our discovery of it in Spain, its only known habitat had been in Italy. Such interrupted distribution seems hardly probable.

For several years we busied ourselves to collect the Spanish mammals—great and small—particularly in view of a monumental work then in preparation by Mr Gerrit S. Miller, and issued by the British Museum in 1912 under the title of *The Mammals of Western Europe*. Among some scores of specimens sent home by us—from tall stags to shrews and

dormice—no less than four were therein described as “TYPES” of new racial forms, to wit:—

- (1) A marten-cat from the Sierra Nevada *Martes foina mediterranea*.
- (2) The lynx from Coto Doñana . . . *Lynx pardellus*.
- (3) The wild-cat from Coto Doñana . . . *Felis sylvestris tartessia*.
- (4) The wild-boar from Coto Doñana . . . *Sus scrofa baticus*.

The story of this wild collecting is told in *Unexplored Spain* under the heading “*Alimañas*” (=minor beasts-of-prey), and forms, to my mind, one of its most interesting chapters.

In wilder Spain one hears rumours of the existence of weird creatures—some, perhaps, apocryphal creatures. Thus there are huge bats which the mountain-folk call vampires (*vampiros*), and which they confidently assert abound in the inner recesses of caves in the sierras, as well as in the galleries of ancient Roman mine-workings—ruins which local tradition usually associates with the glamour of “hidden treasure”; though bats, owls, and hard work are probably the only reward that awaits the credulous explorer. We tested one of these ghastly Eldorados. It involved crawling, bent double, along dark Avernian avenues where heat suffocated and foul airs promptly extinguished our lanterns. Such adventure is not for a septuagenarian; so I retreated to God’s earth above and sat smoking and watching the rope twitching like a wounded snake as it disappeared down the abyss. My companions persisted till near asphyxiated and reported that, though there was no “treasure,” there *were* bats and a huge owl; but these, in labyrinths of dark chambers, defied capture. Nor did any living thing emerge from the exit where I sat on guard. If the big bats were not Giant Noctules, they must belong to some species unknown. Perhaps they *are* vampires—*Quien sabe?*¹

Another faunal incident. In May 1924 I attended a pre-historic bull-fight at the remote mountain-village of Algár, where the Alcalde and local authorities entertained me most hospitably, but specially questioned me concerning a strange wild-beast that abode in their hills. Their descriptions, though precise and detailed, tallied with no living creature of my

¹ Mr Oldfield Thomas suggests their being *Nyctinomus teniotis*.

acquaintance: and these good folk promised to send me a specimen. A fortnight later a big crate arrived at Arcos, containing . . . a live guinea-pig! But such a guinea-pig, big as a hare, orange-bay in colour, black as to one cheek, white on the other! We named him Rupert and turned him, loose in the moat, where he made himself quite at home, devouring every green thing and utterly ignoring the perils of eagles and other predatory foes. Now the family of the *Caviidae* only exists on earth in South America; yet my kind friends at Algár persist in declaring that it abounds in their wild mountains! There the question must rest.

Again, in the South-Spanish sierras there exists an unknown animal called the "*jacal*" = jackal. It may be a mere hybrid between the wild foxes and the hunting-dogs of the shepherds, but its identity is unproven. We met with it ourselves (but without securing a specimen) in the Sierra Bermeja. Now Bermeja stands on the Mediterranean and in full view of the opposite African shore where jackals abound. Hence, bearing in mind the presence of African baboons and Barbary partridge on the Rock of Gibraltar (also within sight), we may preserve an open mind—open, that is, in regard to the jackals of Bermeja, and perhaps to the lemmings at 8000 feet in Grédos (*supra*, p. 104); but scarcely so wide open as to guinea-pigs at Algár, or vampires anywhere in Spain?

It may be worth adding that porcupines are reputed to have existed in the Serranía de Ronda until within the last sixty years or so: also that during the exceptionally severe winter of 1926-7 "jackals," as well as wolves, were reported in the mountains that surround our home at Arcos.

Finally, there remains yet one more fearsome beastie of whose personality we have so often, so positively, and from so many sources, been assured, that it would ill-become us entirely to suppress his fabled status. That beastie is a *snake with hair*—or at least, with tough bristles, extending down the line of the back. Hitherto I have vainly offered uncounted wealth for a specimen. Perhaps a maned serpent may be forthcoming ere this book sees the light? But I doubt it.

CHAPTER XXIII
IN WILDER SPAIN

II.—SPRING (*continued*).

AS spring advances, the bird-life around our crag-girt castle of Arcos suffers a perceptible reduction. This is a reversal of normal conditions, but is clearly attributable, in part, to the withdrawal of certain species northwards, though in larger degree, I think, to the intense sun-heat reflected by the great



A PARACHUTE.

300-foot crags on the apex of which the castle is perched. These, facing southward, form a regular sun-trap. During winter, the overhung ledges and caverns of these limestone precipices are tenanted by griffon vultures, hundreds strong. These, however, do not nest here; and in March the majority withdraw to the adjacent sierras for that purpose. By May, our residents are reduced to a paltry score or two—these being either immature, or veterans over-age (many showing curious dark blotches on their upper surfaces). By midsummer but few remain.

Another notable diminution is noticeable among the warblers and other small insectivorous species, which, in winter, had swarmed among the aloes and cactus bushes that adorn the upper ridges of the abyss. These, no doubt—though all breed in the neighbourhood (blackstarts, chiff-chaffs, orphean, Dartford, and Sardinian warblers, etc.)—find the summer sun-heats unendurable, and depart elsewhere; at any rate, those prehistoric-looking cacti—now aflame with rich golden blossom—are utterly abandoned, save by a few crooning turtle-doves.

On the other hand, by April literally hordes of lesser kestrels have come to share the ancient fortress with ourselves. The

100-foot battlements—dark and austere, yet adorned by bushy hyssop and other prehensile plants, as well as by Nature's pigments of golden lichen and moss—are occupied in every crevice and cranny by these charming little hawks—at least a dozen eyries fall within rod's length of my windows; while minor sites are each utilised by spotless starlings (*Sturnus unicolor*) refulgent in purple and gold.

A charming spectacle in bird-life is staged by these fairy-like little falcons—especially when, in the afterglow, they congregate in hundreds close outside our balcony, wheeling, poising, screaming, pirouetting—almost like bees swarming at a hive. What prey they are pursuing is not at first very clear, for the performance is being carried on at quite 400 feet above the river beneath and neither grasshoppers nor other large insects affect such altitudes. Succulent lizards, crickets, scorpions, sirex, and the like are only to be found on the green *vegas* far below. At intervals, nevertheless, a sudden sidelong swerve, or lightning dash downwards, with out-thrust claw, indicates a capture. That their hunting is not unrewarded is evidenced, when one after another returns to the nest-crevices bearing a victim too small to recognise. Occasionally on the sun-bathed battlements a butterfly will alight—say a Red Admiral, proudly flaunting his array of contrasted radiance; but such-like prey the hawks ignore. One evening, watching from a shaded embrasure, I witnessed this tragedy. Menacingly near my face, a great flying beast hovered and poised on droning wing. What its precise intentions were towards myself were not revealed till, after much cogitation, it plunged into a circular hole in an ancient oaken beam—a beam presumably installed by Phœnicians, Visigoths, or other conquering race in dark ages long forgotten. The intruder was a violet carpenter-bee—an insect with a lurid past—and this beam was a stronghold of his clan. Presently, that big bee backed out, stern-first, and took wing on his "lawful occasion," but hardly had he emerged into open daylight than a shadow flashed past—the shadow of death. A kestrel had also noted the incident and the carpenter's career had closed—usefully closed, since his fat

body would serve to feed a falconet. Nature's dispensations are often—to human eye—appallingly cruel, and few within my narrow horizon more cruel than the rôle assigned to the carpenter-bee—I think I have told his story elsewhere—so that his sudden death might be regarded as “retributive justice”?

To share a home with hordes of predacious neighbours is a joy; but it has certain drawbacks. Thus, in May when our swarming kestrels have each a lusty brood in the battlements, the terrace beneath is littered with dead and dying prey. This includes not merely harmless lizards, geckos, rhinoceros beetles and other innocuous insects; but also moribund snakes and scorpions, tarantulas, giant millepedes and myriapods, which are the reverse of harmless, and being partly disabled by their wounds, the more apt to assume the offensive and sting at sight. Scorpions are particularly dangerous and include a ferocious-looking beast banded in black and gold like a nightmare hornet, whose scientific name is *Bathus occitanus*. Our snakes are mostly the Horse-shoe whipsnake (*Zamenis hippocrepis*), which swarms in the crevices of the crags and climbs perpendicular walls—one we encountered in our workroom in the Barbican tower, 100 feet above the ground. This snake is reputed non-venomous, as are also the big black colubers—some of them 6 feet long—though I took two half-grown rabbits from inside one that we had killed hard by. One grows distrustful. These also, as well as adders, frequent our rocky terraces. In Spain, most reptiles hibernate; but I killed an adder on New Year's Day of 1921. Our crags also harbour genets, mongoose, polecats, etc.

The kestrels continue their hawking throughout the gloaming and until the shades of night close down. Sometimes they toy together in mid-air, pairing as do peewits and swifts at home. I have noticed a pair fall, interlocked, for quite 100 feet. Our vultures, on the other hand, work quite short hours: scavenging, it would appear, is a lucrative avocation. The griffons seldom set forth much before 11 A.M., and are usually careful to return in time for “five o'clock tea.” Vultures seem to have assimilated trade-union principles. Perhaps, more appropriately, the parallel should be reversed?

Almost the only birds besides kestrels and spotless starlings that defy the powers of the southern sun and nest on our crags at Arcos, are the blue rock-pigeons and a pair or two of ravens. The latter, however, have selected for their eyry a re-entrant angle of the crag where they are sheltered from direct sun-rays. It is solely to this intensity of reflected heat that I attribute the local absence of two other species that, in Andalucia, customarily nest in similar precipices—such, for example, as the well-known Tajo of Ronda—but for which one looks in vain at Arcos. These two are the orange-billed chough and the alpine swift. We have, at Arcos, plenty of common and some pallid swifts—also crag-martins—but the dashing flight of the alpine swift is a sight denied to us. The explanation lies doubtless in the fact that, whereas the crags at Ronda face eastwards, ours have a directly southern aspect.

Another striking neighbour deserves passing note. Not seldom a pair of eagles, spick and span, dominate the less noble throng. These are Bonelli's eagles, two eyries of which in the sierra (both within sight) we have long known. We were, however, at a loss to conjecture why these eagles should honour us with a visit here: till, early one morning, the bigger of the twain dropped like a meteor from the sky. I happened to be lying in my bath, but had time to rush, dripping, on to the balcony and witness the result. By the riverside far below the eagle had clutched a domestic fowl from the midst of its brood! The luckless victim was still squalling loudly at the outrage as the robber swept aloft, silent and satiate. The poor despoiled hen-wife below spent hours tearing her hair and calling for vengeance on all the saints in the Decalogue!

Here and there, in this wild region, lie secluded lakes; some isolated by leagues of sandy heaths, others in more rugged environment—many of the latter ensconced amidst lovely landscape of scattered stone-pine and ilex, and enclosed by that wealth of massed shrubbery that characterises Southern Spain—scrub-jungles of arbutus, lentisk, genista, cistus, oleander, giant-heather (man-high), *Osmunda* fern, and other plants too numerous to catalogue, even if I knew their names. In winter,

the larger sheets of water accumulate store of wildfowl; on their placid surfaces one counts mallards, pintail, teal and wigeon; shovelers also, with pochards and other diving-ducks



BONELLI'S EAGLE (*Aquila bonelli*).

Adult female, shot on Guadalete, July 10, 1872.

—practically all the winter wildfowl usual in Southern Europe—and delightful spectacles they then afford.

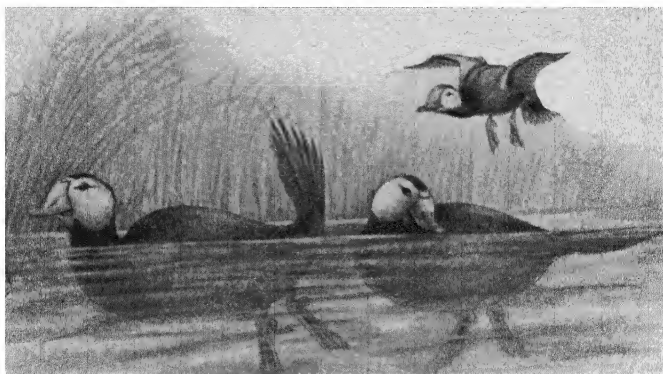
In spring most of these winter wildfowl withdraw, and at that season (with which alone we are here concerned) the focal point in bird-life is transferred to water of quite different type. No longer do those open sylvan lakes, with firm marl bed,

attract; the centre of interest must be sought in sequestered marsh-pools, their narrow water-surfaces choked with tall jungle of sedge and cane-grass—(*carrizos*, in Spanish)—and enclosed in a periphery of treacherous quaking bog. The inner recesses of these are obviously inaccessible, *save afloat*; but since such spots form regular nurseries of bird-life, their exploration repays a trifle of adventure—even if it involves a 10-mile transport of a canoe of sorts.

Early in May, while merely pottering around the outskirts of such a spot (and wondering how the citadel might be attacked), I found the nest of a bird I had never before met with in Spain, clearly that of a *crake* of sorts. It was in water only ankle-deep, supported on a substratum of dead flags, and contained six eggs of a bronzy olive-green, quite distinct from those of all its congeners. This proved to be Baillon's crake (*Porzana bailloni*)—the first I had ever seen. During the next few days I had found, *inter alia*, several nests both of spotted crake, water-rail, and water-hen (all three quite abundant), also two of marsh-harrier, the first on top of a 10-foot briar-barricaded lentiscus, the other built up of flags in a foot of water; but we had also observed indications that determined me not to leave the central fortress unassailed. When, at length, "the boat" arrived, it resembled a worn-out coffin, leaked like a sieve, and threatened to capsize thrice a minute. To it, nevertheless, we owe notable experiences. At once, on gaining the open water inside, we recognised the singular white-faced ducks (*Erismatura leucocephala*)—a compound of cormorant, grebe, and duck combined—and within an hour, amidst the cane-jungle, had found their floating nests, compacted of masses of dried water-weed supported on platforms of porous and buoyant canes. The eggs of these curious amphibians are pure white, large, round, and roughly granulated. Although, on narrow waters such as this, they are loth to take wing—always having shelter close at hand—it is a mistake to assume that they are incapable of doing so. For, on larger lagoons, such as those of Santolalla, the white-faced ducks fly readily, and with the same deceptive speed as do pochards and

other diving-ducks. Also, it is a mistake to regard the white-faced duck as being "rare in Spain." It arrives regularly in March and nests at every reed-choked marsh-pool, large or small, such as that above described.

Another notable waterfowl that abounds here (as in every similar resort) is the great purple water-hen (*Porphyrio cœruleus*)—a savage bird-of-prey, carnivorous and scansorial, albeit in scientific aspect of a totally different persuasion. This water-



WHITE-FACED DUCK (*Erisimatura leucocephala*).

A strange compound of cormorant, grebe, and diving-duck in one.

hen is nearly as big as a blackcock, with a formidable red beak that resembles a pair of champagne-nippers. We found here several of their nests, masses of dead flags built up on floating canes in three feet of water, some of the adjacent reeds broken down a foot or two above, so as to form a sort of canopy. These water-hens of multiple affinities not only prey upon all their feathered neighbours—old, young, or in the egg—but also climb the tall canes, parrot-wise, grasping half-a-dozen stems in their prehensile toes, in order to feed on the succulent inner pith. Here and there float *rafts* of these split canes, known by the natives as *comederos*—dining-places.

So much space has been usurped by the two last-named

species, that little remains to finish my story. Sufficient briefly to add that among others the following were also nesting here: purple herons, in the thickest cane-jungle; great crested and black-necked grebes; coots of both kinds; great reed-warblers, whose harsh nasal notes were ubiquitous, also the sub-alpine and spectacled warblers; while squacco herons, marbled ducks, and white-eyed pochard were also observed. In the open woods outside a booted eagle, on 6th May, had two eggs, distinctly spotted with pale red—which is unusual. The rest of the record reads: between 4th and 14th May, nests of red-necked nightjar, nightingale, Cetti's and Savi's warblers, golden oriole, fantail and rufous-warbler, woodchat, *Hippolais polyglotta* (three eggs, 12th May), calandra, and crested lark, the latter with seven eggs on 8th May, though fledged young were seen on the same day—all the above on the outskirts of our lowland lagoon.



APPENDICES

A

UNSOLVED PROBLEMS

I.—ADOLESCENCE IN THE BIRD-WORLD.

(DEFINITIONS.—The terms *adult* or *mature* are herein used to indicate the full and final typical plumage, whether summer or winter: *immature* or *adolescent* to indicate all preceding stages, or phases, whether the subject be capable of breeding or otherwise.)

THE varying periods ordained in the animal creation to attain complete maturity, though recognised in certain familiar cases, are greatly more extended in operation than is generally perceived even by students. The consequences of a prolonged adolescence, moreover, open up collateral issues which, it follows, must equally have escaped attention. There are species in which adolescence is virtually eliminated—that is, maturity is reached *pari passu* with full growth; while in others it may be extended over a series of years. The rabbit, for example, may be a father, possibly a grandfather ere, a twelve-month has passed over his head; while the elephant hardly contemplates paternity till his third or fourth decade has opened.¹ It is, however, rather with birds that this chapter is concerned.

Two well-known cases will serve to open the subject—those of the eagles and the gulls. In both families (speaking generally) a period of four or five years is required ere reaching complete development; both

¹ *Oswell*, who spent five years among elephants during the virgin days of South-African hunting, put their period of immaturity at fifty years.—*Badminton Library*, Big-Game, vol. i., p. 79. This refers to the wild African elephant. In the Indian species the period of adolescence may be less. Mr Butler tells me of an Indian pair at the Cairo Zoo that produced young ere either parent had reached its twentieth year. The state of captivity, however, may not afford a reliable criterion.

classes meanwhile passing through a corresponding series of intermediate plumage-phases, each denoting the age attained. But whereas all our British gulls recognise their legal (?) disqualifications and remain celibate during their protracted immaturity—some, at least, of the eagles, in the reverse, breed before reaching their full estate.

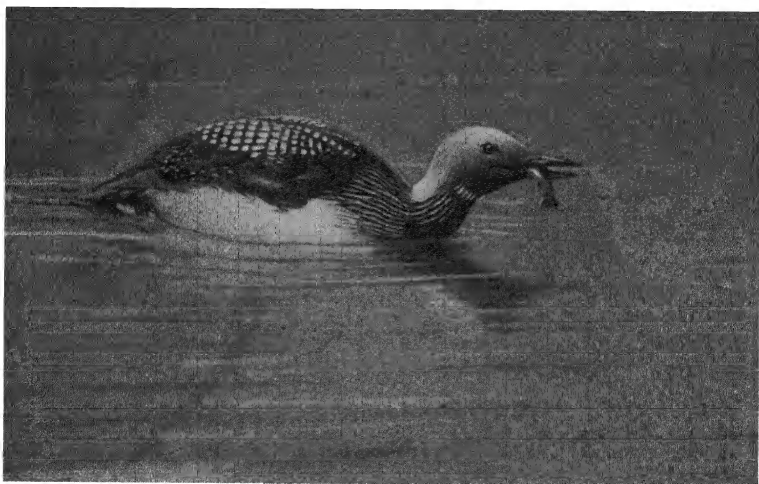


SPANISH IMPERIAL EAGLE (*Aquila adalberti*).

Though still in immature dress, we had kept this eagle in captivity during two and a half years without any indication of its acquiring the adult phase. Its curious history is given in *Wild Spain*, pp. 194 *et seq.*¹

¹ This eagle, which is still in my possession, was examined at the time by Canon Tristram, Howard Saunders, H. Seebohm, and H. E. Dresser, none of whom were prepared to give a positive verdict upon its specific status or character.

Long ago, in Spain, we discovered that a mated pair of imperial eagles (*Aquila adalberti*) might include one partner—whether the male or the female—which had already acquired the majestic adult livery of sable-black set off by white epaulets (see sketches at pp. 223 and 304); while the other was still a stripling in the uniform tawny dress of its earlier years. In Africa also, we found the tawny eagle (*Aq. rapax*) nesting in similarly ill-assorted pairs. I recall a remark of my dear old



BLACK-THROATED DIVER (*Colymbus arcticus*).

Surendal, Norway, June 19, 1892.

friend and mentor, Canon Tristram, that, if such practices became at all regular, those eagles which indulged in the precocity would eventually lose a distinctive adult plumage altogether.

Before leaving that point, an even more singular anomaly deserves remark. Both the great-northern and the ivory-billed divers (*Colymbi*) habitually remain throughout the summer on the coast of Norway, though neither of them breeds in that country. Naturally the bulk of these laggards—all, save two, that I saw myself—are immature and in the normal winter-dress of plainest marbled greys. But a few of each species, Professor Collet observed, actually assume the strikingly conspicuous nuptial dress in a land where none

ever breed.¹ Such a phenomenon runs counter to the established rules that govern bird-life. To assume the similitude of the nuptial estate without proceeding to its consummation almost amounts to a flagitious dereliction of the allotted function in Nature's dispensation? Herein, therefore, we have examples of three divergent lines of bird-life, each mutually self-contradictory:—

1. The gulls rigidly acknowledging the disabilities of the period.
2. Certain eagles precocious enough to abuse them.
3. The Colymbi alone reversing a universal rule—that is, to attain the similitude of breeding without the corollary materialising.²

As regards the bulk of our homely “small birds” (*Passeres*) there is locally little evidence of their undergoing an adolescent hiatus at all—that is, most, or all of them, breed right away in their first spring.

[Formerly I had half-concluded, from watching year after year, that flood-tide of through-transit that surges across Spain each spring, that evidence of a two years' adolescence was discernible in certain species—such as wheatears and pied flycatchers. Particularly of the latter, many migrants displayed only *half* the full-dress of maturity—that is, their plumage was suffused with browns and greys in striking contrast with the spick-and-span perfection of the adults. These adolescents, moreover, remained in Spain after their seniors had passed on, although none ever nest in that country. Subsequently, however, I met with these semi-mature flycatchers in Northumberland, and George Bolam tells me he has found them breeding here in that state. Hence the earlier suspicion remains unproven and this Note is only given place to draw attention to an interesting point. Bewick's two figures of the pied flycatcher further corroborate it. One other common species deserves passing notice. The starling acquires complete adult plumage in its first autumn: yet in May and June is constantly seen associated in big packs, unpaired and without perceptible thought of breeding. Thereat I leave the question of the starling as an unsolved problem: and turn rather to genera that are more familiar to me.]

¹ See *Bird-Life in Arctic Norway*, by Prof. Robert Collet, also his Notes in *The Ibis*, 1894, pp. 269-283.

² There are probably other exceptions overlooked, or outside my survey. Thus among the *Limicolæ*, some of the adolescent grey plovers that summer on the Jaederen coast of Norway, are said to acquire full black breasts, etc., though none, of course, ever breed there—or in Europe (outside Siberia).

That graceful bird-tribe, the Waders (*Limicolæ*) have been prime favourites of mine ever since the triumph (?) of shooting a sanderling in 1868. Even in those earliest days the pronounced divergence *inter se* of their infinite plumage-phases—clearly dependant on and indicative of a wide range in adolescence—attracted my attention. There was, however, in those days—nor is the case materially improved to-day—but scant guidance or help (if any) to throw light on these obscure changes—that is, the prolonged adolescence in certain groups; its total absence in others. Now, after half-a-century's study of these birds in life, I begin to visualise a clearer conception: indeed I regard the conclusions set forth in *The Borders and Beyond* as revealing an entirely new insight into the arcana of bird-life in this regard—an insight that had evaded the ken of generations of ornithologists infinitely more learned than myself. That so dominant a factor in the biology of a big and well-known bird-group should never previously have been recorded—or even suspected—remains the more inexplicable, since it could scarce have been overlooked by any trained observer who cared to spend, say for a few years, the spring-months on our outer coasts and who had eyes to discern what he saw.

It is right, nevertheless, to add (perhaps by way of excuse for the failure of my predecessors!) that, owing not only to the wildness of these world-wanderers, but also to the nature of their chosen haunts, the skilled use of a gunning-punt, if not actually imperative for close-up observation, at least affords opportunities that are attainable by no other means. Even in Spain, through which country our "Globe-spanners" pass in countless hordes each May—having just come from unknown African solitudes where, for six months, no human being has threatened their safety—they are yet so shy and unapproachable that the full craft and appliances of the wildfowler are required to establish any close acquaintanceship. On our own more harassed coasts, these difficulties are necessarily enhanced; especially as the most favoured haunts are usually inaccessible on foot owing to the "rottenness" of the ooze—oozes that will comfortably support 10,000 godwits, will bodily engulf the lightest of humankind! These resorts, moreover, are often insulated—cut off by tidal channels and quicksands.

The puzzle would be solved were it permissible to conceive that orthodox ornithologists, alike of yesterday and to-day, should persistently have foresworn the gunning-punt, shunned the mud-flats and tidal estuaries, squirmed at quicksands and rotten ooze . . . and instead

concentrated sole attention on the more familiar denizens of garden, grove, and woodland—friendly little creatures that can be studied dry-foot. But such a chimera one must, of course, dismiss as preposterous. Perish the thought!

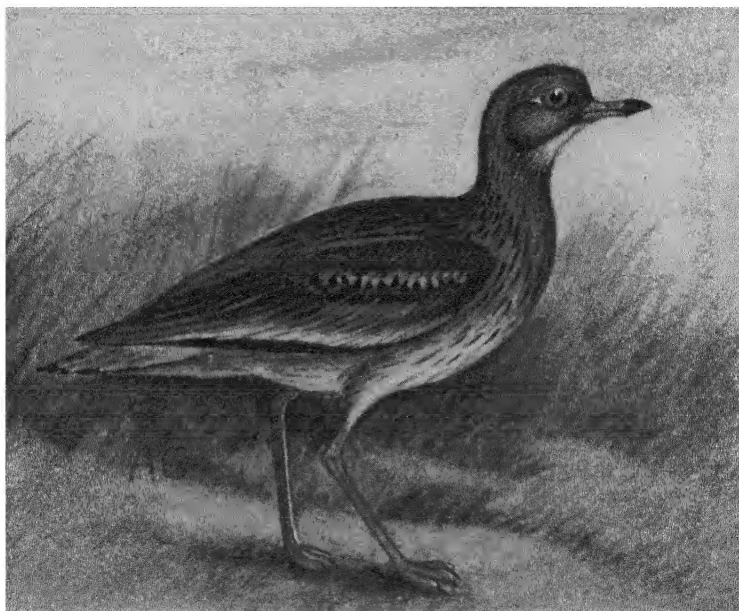
Furthermore, it is essential that a certain limited number of specimens be secured, since eye-judgment never suffices to diagnose subtle distinctions afar—besides human eyesight varies. Some see too much: others fail to perceive what they do see. Solid proof can never be clenched by ocular power alone, however keen it be. Again—another palpable excuse for the failure aforesaid!—those essential “specimens” cannot be secured at home except by breach of the Laws!

[Even in monographs specifically devoted to the *Limicola*, this salient characteristic passes unnoticed. Neither Seebohm in his exhaustive volume on the *Charadriidae*, nor any of our standard authorities on British birds, appear to suspect it. In his *North American Shore-Birds*, so eminent an ornithologist as the late Daniel Giraud Elliot, an Ex-President of the American Ornithologists' Union, entirely overlooks it; and a similar remark applies to Le Mesurier's *Game-Birds and Waterfowl of India*. Even Antipodean energy seems apt to fall short at the sticking-point! For example, in an excellent paper on the *Birds of Queensland* I read this truly candid confession. Concerning one abundant species of the *Limicola*, it is written:—“Observed but once, and under the circumstances, I trust I shall never meet them again. Mud-flats are very interesting in their way, especially to the naturalist; but there can be too much of a good thing”—an *argumentum ad errorem*.

It will be obvious that an initial oversight of such magnitude—that is, the failure to envisage so prominent a feature—involves ignoring its existence *in toto*. Thus the original error necessarily expands into dozens of collateral and subsidiary misconceptions. The whole history of the *Limicola*, in this regard, requires recasting.]

The main features upon which this essay is based having already been elaborated in the work cited—see the chapters entitled “Globe-spanners”—I will proceed without further persiflage to instance a few of the outstanding points. The godwits present a striking example. We have in Europe only two species of godwit: yet these two first-cousins pursue diametrically opposite courses in life. The bar-tailed godwit (*Limosa lapponica*, which abounds on our N.E. Coast) undergoes a protracted period of adolescence, extending certainly to three,

possibly to four years—during which there follow on a series of ceaseless colour-transformations that might rival the ever-varying toilettes of a fashionable Parisienne. This godwit rings the changes through a whole gamut of colours and colour-patterns. Commencing life in a neat suit of buff-speckled browns, it passes year by year



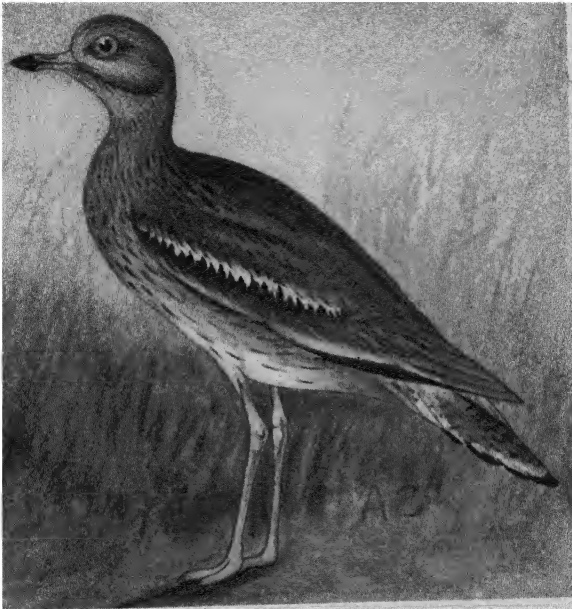
STONE-CURLEW (*Edicnemus crepitans*), young.

Shot in Portugal, October 1871. Foot-prints rectilineal.

through various phases of cold grey, shaded or marbled grey, silver-grey, with an adult winter-garb of plain dark ash-colour—including the tail. Finally, in its third spring, it may reach the gorgeous nuptial array of rich chestnut-red—resuming once more its discarded “bar-tail”—some of these striking transformations being illustrated in colour in *The Borders and Beyond*.

In direct opposition, take its first-cousin, the black-tailed godwit (*Limosa melanura*). This bird, though so closely related, discards all such frivolities, scorns adolescence altogether, and boldly breeds

straight-away in its first spring. At home we see little of this godwit, but in Spain have them in great abundance. There, throughout the winter, we find one and all, old and young, uniformly clad in plainest ashen-grey—all as like as peas in a pod, and without a sign of intermediate phases. But in March, ere they start for the North, one



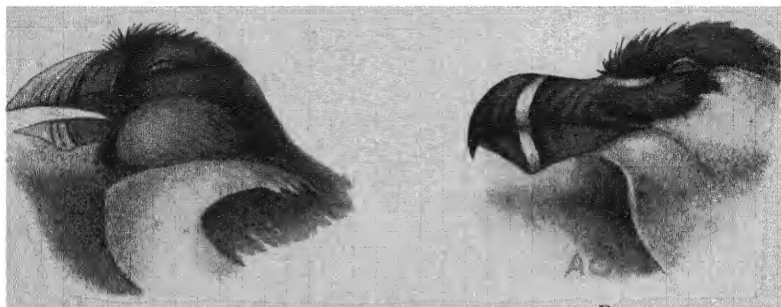
STONE-CURLEW, adult.
Coto Doñana, April 1883.

and all simultaneously begin to don the ruddier nuptial dress that bespeaks full maturity. It is further to note that—again reversing the custom of its more versatile cousin—this black-tailed species won't even wait to perfect that breeding-dress; but, metaphorically, hastens to the altar in a shabby half-and-half substitute for a wedding garment! Could divergence further go?

Another similar anomaly is equally striking. We have two species of plover—the common golden-plover, which gaily accomplishes its complete development in a twelvemonth; whereas its congener, the

grey plover (*Charadrius calceatus*),¹ like the bar-tailed godwit, needs three years to attain its full nuptial glory in ebony and fretted silver.

Equally remarkable, *mutatis mutandis*, are the amazing colour-transformations in the knot, the curlew-sandpiper and sanderling. Were a series of these common British birds, selected at their various ages and seasons, laid before a layman, he would hardly believe that each set represented but a single species: nor are there many orthodox ornithologists (very few indeed within my own narrow



PUFFIN.

Cast ashore on Spanish coast, February 19, 1912.

RAZORBILL.

Cast ashore on Spanish coast, March 9, 1909.



PUFFIN.

Shot, Northumberland, March 21, 1874.

circle) who could correctly diagnose these varied phases and stages of development even with the specimens before their eyes.

One convincing proof of the accuracy of these lessons may be obtained without much difficulty. Go in mid-May to some wide stretch of clean sands along the sea-shore and study with field-glasses a company of sanderlings. Being tame little creatures, they are easily approached—say to 100 yards. At that distance, and in that single company and on a single day, there will be recognised every one of the varied plumage-phases that mark the sanderling's three years

¹ *Charadrius calceatus*—a true plover with a heel (like Achilles)—was the name suggested by myself (*The Borders and Beyond*, p. 126), but I am inclined to think that *Calcaratus* would have been better Latin.

progress to maturity. Some (in *mid-May*) will yet retain the pale and delicate French-grey of their *mid-winter* dress; while, alongside, others have already completed the ruddy nuptial array of midsummer; and between these extremes can be distinguished each of the intermediate stages of colour and tone. Here, at one glance, you have proof positive of an adolescence prolonged over at least two and probably three years; while in exact reverse (as already indicated), other closely-related members of the great clan of the *Limicolæ*—such, for example, as the curlew-sandpiper and Temminck's stint—omit all such procrastination from their life-schedules.



RAZORBILL, shot, Northumberland, February 27, 1917.

Acquiring summer-dress on chin and throat.

Witness also Mr Riddell's coloured drawing of grey plovers in *The Borders and Beyond*—all shot, mark you, on the same day, roth May—another convincing proof. The whole history of the *Limicolæ* in this regard needs re-writing: for, with this vital feature in their biology omitted, our ornithologies, one and all, are but as dry-bones, skeletons bereft of flesh and blood.

The general incidence of adolescence in the bird-world, longer or shorter, is of course far more extensive than the half-dozen instances cited may seem to indicate. There are many such striking irregularities among our commonest birds. Mallard and teal, for example, attain full adult plumage in their first autumn and breed the following spring: whereas their congeners, wigeon, shoveller, shelduck, as well as many of the diving-ducks (golden-eye, tufted and long-tailed ducks, scaup,

scoter, eider) serve much longer periods of apprenticeship. Here are a few such names as occur to one off-hand: Flamingo, gannet, heron, stork (see *Auk*, 1925, p. 363), guillemot and razorbill, grebes, oyster-catcher, goosander, sparrowhawk and goshawk (the latter changing continuously during four or five years). Mr Dugald Macintyre tells me that in Mull he has never known the tiercel, or male, of a pair of peregrine falcons to breed in its red (immature) plumage, though the female falcon occasionally does so.

Any attempt to describe birds such as the above, whether in print or by picture, from the adults only, is obviously inadequate. Too often all these earlier stages (possibly fivefold more numerous and varied) are curtly dismissed in half-a-line such as—"Young resemble the female." In simple fact, the said "young," during their years of adolescence, might easily need far more descriptive matter than their parents, and perhaps require half-a-dozen coloured plates efficiently to portray them as Nature has ordained.

I leave the subject under the head of Unsolved Problems, since no One-man research can suffice to fathom such depths.

II.—AN UNKNOWN REGION.

Amidst the maelstrom of observed facts summarised or suggested in that last section (and more elaborately in *The Borders and Beyond*) emerge certain salient features, as for example:—

(1) That early in each year—what time winter begins to merge into spring (say, about the end of March)—the bulk of the wading-tribes which have wintered on British shores quit our Islands altogether. Whither have they gone? . . . The Arctic regions will not be ready for their reception before midsummer, three months later. Remember, further, that more than half of these fugitives are immature, and these do not breed. That section, therefore, has more than half the year before them, unoccupied. Where do they spend the next six months?

(2) That some two months *after* the departure of our own wintering waders—that is, in mid-May—fresh hosts of waders of identic species (but which have wintered in far Southern latitudes) suddenly *reappear* on our coasts—linger thereon for a few days (or a few hours) and straightway pass on—whither? They are not due in the Arctic—their ultimate destination—for another month. Where do *these* spend that interval? Note, incidentally, that this hiatus of

two months on our own coasts is a very conspicuous phenomenon—strange that it should entirely have escaped attention at home?

In the aggregate, these twin hosts represent no small body, no mere fragment that can easily vanish from view—stowed away in some odd corner. On the contrary, they count into a tangle of millions: yet they do so vanish. The “missing millions” are all shore-birds, strictly denizens of seacoast and tidal estuary. There cannot exist to-day unknown coast-lines where such masses can seek asylum unseen?

As just pointed out, the majority are adolescents which do not breed; and this bigger half, we now know, does not prolong its northward migration so far as that Arctic region which forms the objective and the *incunabulum* of their elders. The younger generation stops short; and although they have the whole summer before them—“unemployed,” so to speak—yet we lose sight of them for half the year. Their total disappearance almost suggests that there *do remain* regions that are, as yet, unknown—that is, of course, in ornithological sense.

In earlier days the mystery of this wholesale vanishment suggested the existence of a warm circumpolar sea lying beyond the known ice-barriers of the Arctic Ocean. Even so late as 1894, Professor Collet of Christiania still entertained the potential idea of an undiscovered archipelago which might prove the refuge of the missing millions (see his *Bird-Life in Arctic Norway*, pp. 25-26). The proposition of that hypothetic asylum has since been shown to have no geologic basis—the North-Polar regions boast no such charming summer-quarters, whether for man, beast, or bird. Our lost friends must have some other refuge.

A corner of the veil may be lifted and a tiny index gleaned from the fact that relatively large numbers of these adolescent waders (including all my Globe-spanners)¹ are now known to spend their summer upon the Jaederen coast of South-west Norway. Now the Jaederen is practically the only low-lying stretch in the whole thousand-mile extension of the Norsk littoral, and therefore adapted to the requirements of wading-birds. Its comparatively narrow extent, nevertheless, precludes that small region providing accommodation for

¹ With the single exception of the curlew-sandpiper—its absence being explained by the fact that this species ignores adolescence, and breeds in its first spring. Hence there are no laggards at any point—at least in western Europe.

anything beyond an infinitesimal fraction of these vast hordes whose summer-address remains an unsolved problem in zoo-geography. There must be unknown "Jaederens" elsewhere? There is space for scores and scores of such resorts if we count from the shores of the Baltic eastwards over the vast and dimly known regions of Russia in Europe and Asia.

III.—COLOUR-CHANGE IN LIVING FEATHERS.

The processes whereby colour-transformation is effected in the feathered creation vary, and one, at least, remains obscure. The simplest, of course, is the complete moult, whereby a bird may change its colours as easily as a man changes his clothes. Change by abrasion, though equally simple, is less popularly understood. Thus, should a bird be clad throughout in feathers the basal three-fourths of which are black, while the remaining fourth (the tip) is white, the general effect of the narrower white margins overlapping the dark bases, would produce a figure which is wholly white. In the ordinary wear-and-tear of life, however, those terminal fringes gradually become abraded and finally worn away by attrition. Then the erstwhile white bird automatically becomes black, though it has not changed a feather.

This is merely given as an illustration of the simplest form of abrasion. In operation, it produces varied results—some subtle, as when attrition, by exposing new facets, may alter, or tend to alter, existing colour-effects.

A familiar example of this is afforded by the Brambling (*Fringilla montifringilla*) which in winter is almost as plain-coloured as a hen-chaffinch, but as spring approaches is seen to assume a strikingly handsome head-piece of glossy blue-black down to the shoulders. This is commonly (but erroneously) set down as a special breeding-plumage. It is nothing of the kind. Those jetty black feathers have been there all winter, but hidden beneath grey terminal fringes. By spring the latter are worn away, exposing the velvet-black bases below.

But there is another process—the actual change of colour in the living feather—which for generations has served as a bone of contention between field-naturalists and microscopists. Elsewhere, I have already described a single instance wherein the operation of this disputed process appears to my eyes to be incontrovertible (*The Borders and Beyond*, pp. 231-232). Many feathers from an old wigeon-drake shot

on 18th July, while in full red summer-plumage, proved on examination that evening to have belonged originally to the older dress acquired the previous autumn. The proof of that was that each of these older feathers bore indelibly stamped upon its texture the hall-mark of winter—the pale grey colours chequered with fine vermiculations which characterise the wigeon's hibernal dress. But, superimposed upon these grey-chequered patterns, the rich ruddy hues of summer suffused the whole exterior half of each *old* feather—incidentally, it should be added, that the *new* red feathers (which had grown up alongside) showed no vermiculations whatever. These latter were, of course, also distinguishable by being perfect in form and outline; whereas the older, winter feathers, having already served some nine months' wear-and-tear, were ragged and thread-bare.

How these new red colours had arrived upon the old grey feathers—whether by “ducts” or otherwise—is a question outside the sphere of a field-naturalist. That they *had* so arrived is self-evident.

One other example—the golden plover in spring. I quote Howard Saunders' words in YARRELL (Fourth edition, iii., p. 272).

“Some new feathers [in the breast], which are obtained in the spring, are black: whilst the old white feathers of winter may be seen in change to black, some of them bearing almost every possible proportion of well-defined black and white on the same feathers, the colouring secretions having equal influence over the old as over the new feathers.”

That is conclusive enough: but should any still dispute it, let them come to Northumberland next April, and in a couple of days the long-voxed question would be settled for ever.

It is at this point that the outdoor observer is tripped up by the microscopist, who argues that such an event as described is impossible for two reasons—first, because the only way that “pigment,” or colouring-matter, can reach the outer web of a feather is through certain hollow ducts, or channels, *inside* the rami; but that, secondly, these ducts cease to function—as it were, to close up—so soon as each feather is full-grown.

Well! the divergence at this point seems to have reached a pretty little *impasse*? Nature, however, knows no *impasses*—they are the creation of Man, whose fertile imaginings are wont to mystify issues with shibboleths such as pigments, ducts, rami and the rest—all doubtless entities of value for proper use. But if colour cannot reach

its allotted position save only by the said interior "ducts"—and if, simultaneously, we find that it *does* arrive after the ducts have closed up, clearly a feather may be coloured by some other method as yet unknown. Possibly we know too much? Or, as elsewhere suggested, the microscope may sometimes master the microscopist?

Plumage in the bird-world corresponds with dress in the human. In either case, disintegration starts from the first moment of use. Its process is slow and graduated, but none the less sure, alike in regard to colour and texture. Attrition, or abrasion from wear-and-tear affects the one, fading by exposure the other. Only once in a bird's lifetime is any individual absolutely uniform and feather-perfect according to type—that *once* being the moment when, as a fledgling, it has acquired its first complete dress. From that moment, disintegration sets in, and never again is perfect uniformity regained, even in species which moult but once a year—far less in those which undergo two or three changes annually. None of the latter class ever acquire the perfect typical plumage which corresponds with their respective ages. Time forbids. The processes of moult are so continuous that—to use a tidal metaphor—the ebb will already have set in, ere yet the flood has reached its full-sea mark. Some of these (especially among the *Limicola*) often present a sort of mosaic of mixed seasons in one—truly at first sight a puzzling problem; though clear as crystal to be read by eyes which have made it a special study.

Do we nowadays "know too much"? A century ago, Prideaux Selby wrote:—"Plumage is not mere inert matter, as believed by Montagu and others, but is endowed with a kind of living principle and influenced by the state and condition of the bird."¹

Both our great Northumbrian naturalists, Selby and C. M. Adamson (also, later, Dr Hans Gadow, F.R.S.) held in effect that its

¹ *Illustrations of British Ornithology*, 1825, Part II., p. 340. See also Selby's remarks in this connection upon shoveler at p. 297; and on the pintail, mallard, teal, merganser, and others of the duck-tribe at p. 313—besides various other references *passim*.

Also, as regards the change of colour in ptarmigan, from summer to winter plumage, see *Badminton Library*, "Shooting," p. 40, and in grouse, the Parliamentary Grouse Committee's preliminary "Notes on Grouse," p. 6

feathers form an integral part of the living organism of a bird, and that these living feathers themselves can change their colours, acquiring new hues in accordance with changing seasons and the "blood-condition" of their owners.

Another notable witness is the late Professor Collet of Christiania. He writes, respecting the big Sea-divers (*Colymbi*), that the assumption of their striking summer-plumage is accomplished, not by a moult but partly by abrasion and partly by a change of colour in the living feathers, though these have already been worn during the greater part of a year. Here are his own words:—

"The change into summer-dress takes place by a combination of shedding the margins and re-coloration . . . the latter occurring very rapidly—probably in the course of a few hours in each individual feather" (*Ibis*, 1894, p. 274).

Only one other example shall be cited. On first arrival on our Border moors in February or March each year, the curlews are at the apex of their "winter-plumage"—all cold greys and varied shades of ash-colour, conspicuously pale—when seen flying low over dark heather, they look almost as light-coloured as sea-gulls. But as the breeding season approaches, their colours change. By April, though they have not moulted a feather, their whole dress has become suffused with a ruddier blush. Then, after the season of reproduction has passed, and before the curlews leave the moors in July, that ruddy flush has disappeared and the whole plumage (by then worn threadbare) comes to look even paler than it was in March.

The same phenomenon, and in even more marked degree, is conspicuous among the *wintering* curlews of our coast, many of which linger thereon throughout June. These winter curlews, ere they depart for northern latitudes, become distinctly more ruddy than even our home-nesting curlews on the moors—at a distance they may easily be mistaken for red godwits in fullest nuptial array. It is to note that these warmer summer-hues are equally transient and evanescent. No trace remains in a dry skin.

Epilogue.—Some of the foregoing references may be regarded as retrograde. The implication I accept, but not the epithet—unless in the sense of retrospective: or otherwise that the further contention

be likewise agreed, that all that is new is, *ipso facto*, superior to whatever is older. None perhaps will seriously argue either that ; or its converse—

“That we should all opinions hold
Authentic, just because they're old—”

Unless it be some ultra-moderns who, we are told, are born a thousand years old and with all the accumulated knowledge of the centuries chucked, ready-made, into the cradle. That is an unthinkable advantage?

AFTER-THOUGHTS.

A suggestion is made above (p. 322) that the skilled use of a gunning-punt was essential for the elucidation of obscure points in the life-history of a certain bird-group—the *Limicola*—points which had hitherto escaped the observation of ornithologists in all ages. Nor need that suggestion be restricted to a single group: it may be appropriate here to adduce a second analogous instance. I refer to the use of a cart in approaching moorgame in winter—as fully described in my *Bird-life of the Borders*. By means of that antiquated and long-forgotten device, certain vital features both in the biology and in the genealogy of the Red Grouse (*Lagopus scoticus*) have been rescued from a transient oblivion and set out in detail, both in the work just cited and also in *The Borders and Beyond*. Doubtless some of these facts would be familiar enough to grouse-shooters of a couple of generations ago; but they do not fall within the scope of observation under the changed methods of to-day. Hence my re-statement of them was at first doubted, and even disputed by those who had had no opportunity of verifying them at first-hand. Just as the trim gunboat of the fowler has served to trace cryptic points in the life-history of the *Limicolæ*, so the cumbrous “coup-cart” of the farmer has rendered similar service to the *Tetraonidæ*. The use of the *calresto*-pony in approaching wildfowl in Spain, affords a third instance.

While yet passing these chapters through the Press, my beloved wildfowl have *twice* been dragged into unwonted limelight—first, in that amazing REPORT ON THE STATUS OF WILDFOWL IN EUROPE, issued under the ægis of the British Museum, and already criticised at p. 52; more recently in a third INTERNATIONAL CONFERENCE ON WILDFOWL, held in London. This conference was composed of the most distinguished Professors of Zoology in Europe, together with high ornithological authorities at home and abroad. Curious it is, never-

theless, that in neither case was there included a single wildfowler who could speak from practical experience. Apparently he is not a *Persona grata* where dogma counts before facts.

Both these Utopian Assemblies accept as a fact—and make it the text for their sermons—that “wildfowl are decreasing in Europe.” No evidence, however, is produced to enable outsiders to form an opinion on the validity of that text—or of their other assertions. In simple fact, no such evidence is available, since the alleged “decrease” is but a figment of fevered imaginations and has not occurred in the wider spaces where wildfowl are wont to congregate, whatever brain-waves may surge in the environs of Stockholm, or of Copenhagen, and thence spreading to Whitehall. The true status of “Wildfowl in Europe” has already been made sufficiently clear both in the present and in my former works, and needs no further demonstration: though it may properly be added that the views of every practical wildfowler who has ventured to trespass in this vexed domain of print, coincide in every detail with my own.

Let the “International Conference” be re-assured. Let them dry their eyes and save a flood of fruitless tears. Those excursions and alarms of theirs are but phantoms of their own creation. Don’t let these poor Lost Babes-in-the-Wood take my mere word for it: but let them in this (as in other matters) ponder my advice to—GO AND SEE FOR THEMSELVES.

Fas est et ab hoste doceri—



B

“THE SEEING EYE REVEALS BUT DOES
NOT INVENT.”

THROUGHOUT a long life, it has happily fallen to the Author's lot again and again, and under widely differing circumstances to witness aggregations of wild animal-life such, it would appear, as to seem wholly incredible to those who have not enjoyed the like opportunity. The remark applies both to big-game and (perhaps more particularly) to wildfowl. Of the big-game, as specifically detailed in each of my African books, one may yet, in favoured regions, count many hundreds, possibly thousands, all in sight from a single view-point, and including, it may be, ten or a dozen different species, some peacefully grazing or resting, others playing, fighting, cavorting, both on equatorial veld and on the far-flung flats of Savage Sudan. Most numerous are the antelopes in varied sizes—from big beasts such as eland and oryx, roan, waterbuck and brindled gnu; grading downwards to impala, cobs, and gazelles in hundreds; while, scattered over the plain, are great mobs of zebra and hartebeest mixed, oft attended by tall ostriches or rooting wart-hogs. Hard by a group of giant giraffes overtop the lowly mimosas:—

Four-storied creatures which deny
Superior terrors to the sky.

Besides these well-nigh ubiquitous beasts, one may also descry a troop of buffalo; while half-a-dozen slouching hyenas, unheeded by all, are holding a belated inquest over some bones at the foot of a koppie; and, beyond, the keen sight of your savage gunbearer detects a pair of rhinoceros, fast asleep in the shade of a table-topped acacia. All the above are in plain view; but you also know that, beyond what is actually visible, those patches of bush-jungle and the fringing palmitess of the riverside presently conceal the whole nocturnal crowd—lion and leopard, with minor felines; bushbuck, duiker and dik-dik, and many more of lesser note.

Such scenes, in popular estimation, pertain rather to the Pleistocene than to our modern epoch: but remember that only 50 or 60 years ago these were the commonplaces of Southern Africa. From the Sub-Continent they have been ruthlessly banished within human memory; but there yet survive regions farther north—especially in Equatoria—where their counterparts may still rejoice the eye. Remember also that the power still remains in our hands—and equally the *Duty*—to preserve this wondrous inheritance for posterity.

Turning next to wildfowl, we have been assured on high authority that these are dangerously decreasing. Now, in order to form any reliable judgment of their local numbers and species, it is necessary to watch their movements at and before the dawn for, at least, a few days—it may need weeks, or even months, in the wider spaces. Have the “Wise men from the East”—to wit, from Stockholm or Copenhagen—ever taken this trouble? Or do our own cabinet authorities lightly indite “*Reports*” on wildfowl they have never seen? Can these Preachers of facile gospels conceive of spots where massed aggregations of duck darken mile beyond mile of open waters, covering its entire surface as with a league-long carpet? Does it lie outside their philosophy to picture North British foreshores wholly hidden by masses of wild-geese, whose numbers cannot be counted save in terms of tens of thousands? Of each and all such scenes—everyday scenes at their proper time and place—I stand as an eye-witness.

Such, however, are the innumerable numbers of wildfowl that are wont to congregate at congenial resorts, whether in Spain or Greece, the Arctic or elsewhere—say on Danubian or Nilotic lagoon, on Dutch or Danish Broad, and even, at times, on our own British coasts—that a lurking fear of being discredited has ever half-paralysed one’s pen. A kindly American critic of one of my former works summarised his impressions thus:—

“Our Author’s descriptions leave his gasping reader with a feeling that he has not been told the half.”

Quite true. That reviewer possessed introspective vision beyond most. A haunting dread of the suspicion of Munchausenism drives one almost to doubt one’s own eyesight, one’s written notes and stored recollections; but a studied survey in retrospect of my ten books has satisfied me that not one of them need plead guilty either to deliberate exaggeration of fact or to over-coloured description—quite the reverse.

Thus upon this clean-cut issue, it is obvious that one or the other of us—either the high “International” authorities on wildfowl or the Author—is totally and hopelessly in the wrong. Which is it? There is no half-way house: nor, till a clear answer to that question is forthcoming, can we ever hope to reach *The Bed-rock of Fact*.

P. & O. s.s. *Narkunda*,
Off Crete, Dec. 26, 1927.

C

THE ORIGIN OF THE SABI SANCTUARY, NOW
THE "KRUGER NATIONAL PARK."

[*Draft of Scheme for Preserving and Re-establishing the Large Game and Wild Animal-life in the Transvaal, as initiated by ABEL CHAPMAN in December 1900. See p. 210, supra.*]

PROPOSED NATIONAL GAME-RESERVE IN THE
TRANSVAAL.

On the lines contemplated in the International "Convention for the Preservation of Wild Animals, etc., in Africa." (Signed at London, 19th May 1900.)

THE following are outlines of a scheme for preserving and re-establishing the wild animal-life in this part of South Africa, without interfering with human interests, and on a self-supporting basis.

At the close of the present war, there will pass finally under British control, a certain tract of country which is, has always been, and always must remain, of no practical value or utility to man. It is, on the other hand, an ideal reserve for game and wild animals, having well-defined natural boundaries, and being already the home of many of the finest of the African antelopes (such as sable and roan antelopes, brindled gnu, waterbuck, sassaby, etc.), as well as of the giraffe, buffalo, zebra, wild ostrich, hippopotamus, rhinoceros, etc. Elephants also were numerous there some twenty years ago, and still come in during the "rainy season."

This territory is the "Bush-veld" of the North-Eastern Transvaal—all low-lying country, well-wooded and well-watered; but a purely *fever-district*, so infected with malaria that neither man (black or white) nor cattle, horses, etc., can live there, EXCEPT during the short "dry season" of winter. That is to say, the whole area is necessarily uninhabited during the greater part of the twelvemonth. During the

aforesaid "dry season" (June to August), Boers were in the habit of trekking down from the adjacent "High Veld" with their cattle—nominally for the winter grazing. Their chief object was, in fact, the game.

BOUNDARIES.

These are all natural, well-defined, and ample for the purpose, as follows:—

West—The Drakensberg Range, which borders the whole extent of the "Bush-veld" as with a wall, thousands of feet in height.

East—The Libombo Range, which also forms the international frontier between British and Portuguese territories.

North—Either of the great rivers, Limpopo, or Olifant's River—whichever may be selected—both practically impassable.

South—Here also the choice of two great rivers is available: The Sabi, or the Crocodile—the "drifts" of either being readily closable against trespassers.

EXTENT.

From the Limpopo to the Crocodile is, roughly, about 200 miles, while the breadth of the "Bush-veld" (east and west) averages about 80 miles—the whole a barren waste, incapable of cultivation, and without any legitimate population; in short, useless except for game.

GAME.

The Bush-veld is still fairly stocked with the survivors of a fauna that, only a few years ago, absolutely swarmed all over it. The following is a rough synopsis of the faunal conditions last year, when the present writer spent three months (June to August 1899) in the Bush-veld—immediately before the outbreak of war.

(a) ABUNDANT.—Blue wildebeest, impala, and zebra in thousands: waterbuck, sassaby, reedbuck, duiker, steenbuck, klipspringer, wart-hog, lion, leopard, and other beasts of prey; besides francolins of many kinds, guinea-fowl, bustards, quails, hares, and other small game.

(b) LESS NUMEROUS, yet holding their own—sable and roan antelopes: koodoo, a few: giraffe, estimated at 100 head: buffalo, a few scattered troops: cheetah, and wild ostrich.

(c) SCARCE, yet surviving—elands, rhino, hippo. Elephants also were formerly resident here, but are now banished except during the rainy season of fever. Being found close by, on Portuguese territory beyond the Olifant's River, elephants would doubtless return when protected, as also would eland and other animals.

In addition to the animals just named as belonging to the *Bushveld proper*, the following species are also found on the adjacent slopes and foothills of the Drakensberg, to wit—Bush-buck, red (or Natal) duiker, oribi, rooi and Vaal rhebucks, and bush-pig—all numerous.

There are also innumerable other creatures scattered over the district, of less value but of great interest to the naturalist—such as, e.g., ant-bears and porcupines, ratels, genets, civet and tiger-cats, hyænas, hunting-dogs (*Lycaon*), jackals of various kinds, secretary-bird, maraboo, baboons and monkeys, besides crocodiles, pythons, monitors, and many more.

PRESERVATION.

If the whole of this fever-infected Bush-veld was proclaimed a National Game-Reserve, and *all* shooting therein absolutely prohibited for a time, I believe that within a few years the whole of the animals mentioned above would rapidly regain something of their original numbers, and that, say, in ten years, the veld would once more teem with them.

For this purpose it would be necessary to have a practical British "Head Ranger" with two Under Rangers (white), stationed as near the Bush-veld as fever will allow, and actually resident *within it* during the healthy "dry season." Under them would be required an adequate Police force—mostly, if not entirely, natives (Kaffirs).

Such an organisation can be completed and brought into force at once, and will effectually protect the game and prevent all poaching, whether by Boers or Kaffirs.

Two years hence (with nothing done), the chance, and the game, will have passed away for ever.

The Bush-veld, it may here be repeated, presents this immense natural advantage as a Game-Reserve, that its boundaries can be so easily guarded.

The huge wall of the Drakensberg, separating the treeless "High Veld" of the Boers, from these uninhabited fever-stricken plains at its base, is only traversable by wagons at certain well-known passes—(and without wagons none can hunt the Bush-veld). Similarly, again, the "drifts" on its frontier rivers, being few and far between, are easily watched. In short, both mountain-passes and river-drifts can be effectively guarded at a minimum of expense.

The Bush-veld itself, lying several thousand feet below the highland plateaux that crown the Drakensberg—(and which low elevation explains its unhealthy character)—consists of rolling prairie-lands, park-like, and diversified with open wood, while belts of jungle and thicker forest border the various rivers that traverse it. The soil is hard, sterile, and incultivable, and there are many saline creeks. It is, indeed, an ideal home for game.

EXPENSE.

This, roughly estimated, need not exceed £2500 a year. Thus at the end of five years some £12,500 would have been expended; but, *after that period*, the Reserve should become self-supporting, or even (if so desired) a source of profit.

In the sixth season shooting-licenses might probably be granted to twenty or more shooting parties (two rifles each)—each strictly limited to so many head of each species of animals as their respective abundance at the time may warrant. These "limits" could be decided from time to time by the Head Ranger, and each party should be accompanied by an official to ensure the "limits" being observed.

If, in the sixth year, only twenty licenses were issued—say forty rifles at £100 apiece, a sufficient revenue would thus be obtained to cover the whole cost of preservation.

Unless there is a serious flaw in this estimate, it will be obvious that in a few more years, when the game, by strict care and attention, shall have been raised to its former abundance, this Game-Reserve might readily be made, if so desired, a source of considerable profit to the Transvaal Colony.

There would be ample area (and game) for fifty or sixty rifles, at not less than £100 apiece; while a further revenue would also accrue from the sale of living specimens of African animals to the Zoological Societies and Gardens of the world.

This is placing the matter on a purely commercial and practical

footing—it treats the game (on public lands) as a valuable property and an “asset” of the State. In the result, the great object will be achieved of saving, for all time, the now fast-vanishing fauna of South Africa; besides incidentally providing (within a brief period) a fair abundance of sport, and all upon a self-supporting basis.

ABEL CHAPMAN.

HOUGHTY, WARK,
December 1900.

P.S.—It is possible that at first some difficulty might arise from the circumstance that certain “concessions” of ground have been granted by the late Transvaal Government, to prospectors and gold-mining Companies. These, however, I believe, related solely to *gold* rights, and no gold, it has now been ascertained, exists within the Bush-veld; nor, even if it did, could it be worked in this fever-belt except during the short “dry season.”

[COPY OF THE AUTHOR'S COVERING LETTER.]

. . . *December 1900.*

To His Majesty's Secretary of State, Colonial Office.

SIR,—Most respectfully I beg your perusal of the enclosed “Scheme for Preserving and Re-establishing the Large Game and Wild Animal-Life in the Transvaal.”

For very many years the South-African Fauna has been subjected to a merciless and indiscriminate slaughter. Several species, once abundant, have been swept off the face of the earth: others, at this moment, are threatened with a like fate—extinction: while almost all are reduced in numbers to a tithe of what may be regarded as a safe and fair stock.

The present moment affords a unique opportunity for saving the survivors—an opportunity that can never recur, since the objects will have passed away for ever.

The tract of waste land forming the north-east corner of the Transvaal is peculiarly adapted for the purpose proposed—that is, a National Game Reserve on the lines contemplated in the “International Convention” for this purpose, which was signed at London on the 19th of May last (1900). The land in question is absolutely useless

for every other purpose and is wholly uninhabited. Not even Kaffirs can withstand the deadly malaria of its long "rainy season" (nine months).

Most earnestly I would urge upon your consideration this important fact:—namely, that this comparatively small area of useless, fever-drenched "Bush" (approximately 8000 square miles) contains a greater variety of wild animal-life than the whole of Continental Europe, or even than the whole United States of America.

Antelopes are represented by no fewer than eighteen species, including such exquisite types as the koodoo, brindled gnu, waterbuck, sable and roan antelopes; while, in addition, there also survive in this fever-belt several other menaced forms such as, *e.g.*, the giraffe and ostrich, zebra and buffalo, besides the great pachyderms (hippo, rhino and elephant) all reduced dangerously near the verge of extirpation.

To prevent these beautiful creatures from disappearing for ever—to preserve them for all time—is, I humbly submit, an object worthy of consideration by the Government. Most earnestly I trust that you may see your way to support this object and that the Government will take steps to give it effect before the ensuing "dry season" (next May).

I cannot but apologise for addressing this appeal to you at a time of such urgency in South African affairs. My only excuse is that, if anything effective is to be done, it must needs be done at once.

I will gladly give any further information in my power, or wait upon you in London at any time you may appoint.—Your obedient servant,

ABEL CHAPMAN.

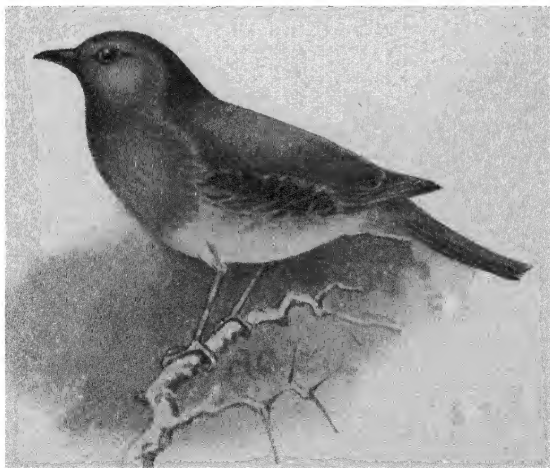
POSTSCRIPT—TWENTY-SEVEN YEARS LATER.

Two of the latest developments, as specified in *The Times* of 22nd and 24th August 1927, deserve notice, to wit:—

- (1) In August 1927 the trustees of the *Kruger National Park* (previously the Sabi Sanctuary), acting for the Union Government of South Africa, decided to spend a sum of £4000 (merely as a first instalment) upon the construction of motor roads throughout the Park, so as to enable visitors to witness its wondrous scenes in wild life, hotels also being constructed. "Tourists will be provided with motor-cars and armed guides, but not themselves allowed to carry rifles."

- (2) Owing to severe droughts in the Bush-veld, great herds of wildebeests (brindled gnu), estimated at 15,000 head—which is probably an exaggeration—have overflowed from the Sanctuary into Swaziland and other settled districts adjoining, and are reported to be causing great damage to crops, etc. Large numbers have already been shot and the farmers are appealing to Government to have these animals declared “Vermin.” With the gnus came a certain proportion of zebras, koodoo, and other large game; and these, as was natural, are being followed up by lions! Possibly “Preservation” has gone too far?

August 31, 1927.



ROBIN—VARIETY WITH BLACK FLANKS.
Melrose-on-Tweed, June 11, 1911.

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TWO APPRECIATIONS OF ABEL CHAPMAN'S WORKS

EDITORIAL by THEODORE ROOSEVELT, ex-President
of the U.S.A., in *The Outlook*, New York,
16th September 1911.

"A HUNTER-NATURALIST IN EUROPE AND AFRICA"

"Half a century ago it looked as if we would develop hunters who knew nothing whatever of anything except hunting; zoologists who knew the life only from museum specimens; and outdoor lovers of Nature who were incompetent to add to scientific knowledge or to describe Nature in its wilder and more imposing forms, animate and inanimate. Nowadays we are tending to develop much higher types of all of these, and also a type which includes them all. The man who is to do the best work as a zoologist must be an out-of-doors man of the field, as well as a man of the laboratory, book-shelf, and microscope. The Big-Game hunter cannot possibly be of much use from a serious standpoint unless he is also a keen naturalist. The outdoor man who writes should not only be a keen observer and a man of genuine literary capacity, absolutely trustworthy and able to tell with interest and charm what he has seen, but ought also to possess the power to utilise, and to add to, what science can teach . . . to tell of the great epic tragedy of life which is unfolded in the stark wilderness. . . .

"Mr Abel Chapman's books are good from every standpoint I have mentioned. He is a sportsman who knows how to observe, and how to tell what he sees. He is a Big-Game hunter of renown; and on every hunt he watches with keen interest all the smaller life of the wilderness. He can both write and draw. There is not one of his books, whether dealing with the land-birds and wildfowl of Northumberland, with wild Norway or wilder Spain, or with the giant fauna of Equatorial Africa which a man who cares for natural history, shooting, or hunting, can afford to be without.

"The volumes on Spain have an especial charm, because the Authors penetrated into out-of-the-way corners of one of the oldest and least known portions of Europe. . . . They gave us our first adequate knowledge of the Spanish ibex and first revealed the truth about the nesting habits of the flamingo. . . . Not since Lloyd has so good a book appeared on the Scandinavian Peninsula as Chapman's *Wild Norway*, and Lloyd was by no means so competent to tell us about the smaller forms of Life. . . . The Northumberland volumes, excellent from every standpoint, show how much room there is for the best kind of work of this nature nearer home. Mr Chapman's books on Spain derive part of their interest from the fact that he went where practically no one else had gone before. But he wrote about Northumberland simply as Jefferies could and did write about Devon, and Colquhoun and St John about the Highlands of

Scotland. . . . There is hardly a State [in the U.S.A.] about which it would not be possible to produce a book as interesting as that of Mr Chapman about Northumberland, if only there were produced, in each case, a man combining, as Mr Chapman combines, the abilities of sportsman, naturalist, and writer.

"Mr Chapman's *On Safari* must be numbered among the best books that have been written about African Big-Game, and this although he had not had one-tenth or one-hundredth part of the experience that many of the great African hunters had enjoyed. . . . The average Big-Game hunter writes a book about as interesting as a Baedeker, and nothing like as useful. . . . Mr Chapman puts before our eyes a vivid picture of the Great Game of East Africa such as hardly any other writer paints for us . . . because, without useless detail, he yet tells us everything essential, so that we can all see it with our eyes. . . . We know exactly how the rhinoceros looked and how he acted; we see the hartebeest overcome with pride as he leads the thirsty files of wildebeests down to the water. . . . Moreover, with pen and pencil he brings before us pictures of many of those striking birds that delight the eyes of the African hunter.

"Finally, Mr Chapman's observations on natural history should be held up as an example to those writers who make observations only with the deliberate purpose of twisting them into the support of some theory. . . . I differ from him in certain details; but honest differences of opinion, honest differences in seeing and interpreting facts, are helps and not hindrances to getting at the truth."

REVIEW by F. C. SELOUS, in *Saturday Review*, on
9th January 1909.

[*The only Review that Selous ever wrote.*]

"Fifteen years have passed since the publication of *Wild Spain*, one of the most delightful works on sport and natural history ever written; and now Mr Abel Chapman has given us in *On Safari* his more recent experiences in wilder surroundings and amidst greater game. The result is a most interesting and informing book on the great game of East Africa—a book which can only enhance the Author's reputation as a good sportsman who delights in the wild-life of the unspoilt wilderness. . . . Throughout, we have constant notes upon the lesser beasts and on the wonderful bird-life of East Africa, which prove that the keen, observant eyes that were the first to note the position assumed by flamingos when incubating on their mud nests in the *marismas* of Andalucia, have not grown dim, nor the enquiring mind of the naturalist become less receptive than of old. . . . Space forbids further comments on this valuable book, every page of which I have read from cover to cover with great interest. To me Mr Chapman's style of writing has always been most attractive—simple, straightforward, modest, and convincingly truthful."

PRESS REVIEWS OF OTHER WORKS

THE BORDERS AND BEYOND

The Spectator.—"Readers of *Savage Sudan* and of Mr Chapman's other books will remember the feeling of health and exhilaration which his writing gives. . . . Here is a book that seems gusty with the open air ; the salmon and grouse, trout and wildfowl to which Mr Chapman introduces us live before us in their true character and habit."

The Field.—"Mr Abel Chapman needs no introduction to readers of *The Field*. Evidence of the culture and picturesqueness of his writing, of the keenness of his observations, and the reliability of his records of natural history, of the genuineness of his sportsmanship, of his controversial and critical powers have been supplied over and over again by his contributions to this paper ; and all who have read these and his previously published volumes will be prepared, and will not be disappointed, to find *The Borders and Beyond* as charming and absorbing as its predecessors. . . .

"That the value and attractiveness of the book are increased by its admirable and profuse illustrations will be admitted on all hands. We have seldom seen wash-drawings of birds that pleased us more ; and the coloured plates by Mr W. H. Riddell are in many cases beautiful pictures, and all are as true to life as the best we can recall in similar books."

Nature.—"This book is a fine record of personal observations of wild life at home and abroad. . . .

"The numerous illustrations are just what one would wish for in such a work, namely, field-sketches from the author's own pencil."

SAVAGE SUDAN

The Times.—"Mr Abel Chapman stands in the front rank of those who have studied and pursued wild creatures in their native haunts at home and abroad. . . . He is of the old breed in taking time over his travels, following the slower and wilder routes and pursuing his quarry on foot. He is therefore able to give a picture of the Sudan that is detailed, vivid and exact."

The Spectator.—"Mr Abel Chapman's finely illustrated *Savage Sudan* is devoted entirely to its wild animals and wilder people. . . . He is not one of those sportsmen whose only desire is to secure tusks and trophies. On the contrary, he is a passionate student of wild nature. . . . We may say with perfect confidence that this is the best book written on the Sudan since Sir Samuel Baker's day."

PRESS REVIEWS OF OTHER WORKS

The Field.—"Mr Chapman is one of the very best hunter-naturalists, and he tells of the habits of all the wild life which he encountered as he himself observed them. The more faithful a story is to Nature the more interesting it becomes, and the more valuable the lessons which may be learnt. All Mr Chapman's stories—and he has many a charming little anecdote told in his delightful way—are wholly faithful to Nature. Consequently this is a book which one may read many times, and each time learn something new.

"The author's many sketches of animal and bird-life add to the charm of this delightful record of careful observations, and the book will live as one of the outstanding classics among sporting literature."

African World.—"A superb book, one to revel in."

BIRD-LIFE OF THE BORDERS

Athenæum.—"At last we have a book on birds in their haunts by a writer who is thoroughly master of his subject, and who knows how to place his experience vividly before the reader. The portions devoted to the Cheviots and the moorlands recall the scent of heather, while the narrative of adventures by day and night in a gunning-punt is pervaded by keen salt breezes from the North Sea. . . . The haunts and habits of wildfowl both by day and by night have never before been so clearly pointed out in any work with which we are acquainted."

Morning Post.—"Of the many admirable books on British birds, Mr Abel Chapman's *Bird-life of the Borders* is undoubtedly one of the best, destined in all probability to the same kind of immortality as that enjoyed by the famous 'Natural History of Selborne.' . . . A short notice can give no adequate idea of the varied interest of this work, which is one of exceptional worth."

ON SAFARI

The Globe.—"Short of making extracts altogether unfairly too long, it is difficult to convey an idea of the peculiar fascination of this record of Mr Chapman's hunts in British East Africa. Nothing as a rule is more dull than a mere catalogue of Big-Game destroyed; but though Mr Chapman will shoot you three or four tons of flesh between lunch and dinner, he avoids all temptation to make his book a list of slaughtered animals. He is first and foremost a hunter, and a seeker for fresh specimens of animal-life. But he is not a butcher like some travellers, or a savage, with a white man's face and a black man's heart. He is a hunter because he is at once an adventurer and a naturalist, a man who loves to be in positions which most of us would heartily pray to be delivered from, and who can make zoological notes when other men would be thinking of making their wills."

PRESS REVIEWS OF OTHER WORKS

"There is a sense of wealth and spaciousness about this book which comes like a breath from the forest to us poor dwellers in London town. His elephants are in tribes; his rhinoceroses rise in coveys; hippopotami are as common in his lakes as gold-fish at Hampton Court; and his very pigs are monsters, inconceivable as possible pork. Over the tale of his adventures lies an atmosphere of boundless freedom, of a world in which Man is still but a competitor—and not always a very successful one—with the beasts, and has not yet enslaved either himself or them. We can imagine no better remedy for anyone afflicted with the disease of over-civilisation than a trip to Uganda with Mr Chapman. It would indeed very probably kill him unless he speedily developed Mr Chapman's fleetness of foot and quickness of eye, but if it did not, it would certainly cure him. . . .

"From no other book have we got so vivid an idea of what hunting Big-Game in British East Africa really means. Mr Chapman puts his nose into a hole in the earth, and out bounces a great red-haired warthog with tusches ten inches long, and the most intelligent notion of putting them where they will do most good. Our author and a bull-elephant, about the size of St Paul's Cathedral, more or less, spend a happy summer day chasing one another through grass ten feet high and thorns like barbed wire, and eventually part with, apparently mutual regret. On another occasion he and his brother lie 'doggo' while parties of justly infuriated pachyderms endeavour to search them out, and only fail to find them because it does not occur to the searchers that any man would be so audacious as to hide under their very feet.

"Mr Chapman makes no pretence to sentimentality, is totally free from that detestable callousness to suffering which enables some 'sportsmen' to leave a wounded creature to die by inches. If he has hit anything he will follow it up, right across Africa, if need be, and will see that it is swiftly and decently killed, if it be by any means possible to do so. We only wish all other hunters of big-game would follow his excellent example."

UNEXPLORED SPAIN

The Morning Post.—"But for the earlier work of the same authors, this book might be called unique . . . it is even better than its predecessor. There is a something strangely stimulating throughout—a breath of human sympathy, a mellow philosophy of outlook, that prove the authors true citizens of the world and lovers of their kind. They have, moreover, the seeing eye for Nature and all her works; they know the way of an eagle in the air and the heart of the herdsman on the hill. . . . Absolutely free from prejudice, the authors have caught the inmost spirit of an alien race and country, and write of it with the modesty and moderation which is begotten of real knowledge."

